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Champion Coated Paper to Build Power Plant

Will Install Huge Babcock & Wilcox Boiler Said to Be the Largest for Its Kind in the World—Plant Will be The Last Word in Efficiency in Every Detail—Pulverized Coal Will Be Used in Generating Steam—New Plant Expected To Be in Operation by Feb. 1. F. K. Vaughn Co. of Hamilton To Do Construction Work

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, July 22, 1929.—The Champion Coated Paper Company of Hamilton is planning the construction of a new power plant which promises to be the "last word" in modern paper mill power efficiency. A 650-pound pressure boiler, the largest of its kind in the world, will form the nucelus around which will be erected the power plant, which will employ the greatest efficiency known to modern engineering, according to plans that have been completed.

It is expected the old buildings on the site selected for the plant will be demolished without delay and that work on the improvement, the most important in the recent history of the company, will be started in the near future. The new plant will have a capacity of over 30,000 kilowatts, more than two and one-half times that of the city's new electric light plant, by way of comparison.

Will Furnish All Power Needed

The Champion Coated Paper Company's unit will furnish not only necessary electric power for the entire plant, but also will furnish all the steam needed in the work of the mill. At present, the company is buying a large part of its power from the Union Gas and Electric Company. The boiler will be located in a building 80 feet in height, fronting on North B street. The huge tank itself will be 75 feet in length, and will be capable of generating boiler energy of 11,000 horse power.

Pulverized coal, capable of developing the maximum amount of heat, will be used in generating steam. Steam will be generated at a pressure of 650 pounds, and a temperature of 750 degrees. The boiler is being installed by the Babcock & Wilcox Company, under the supervision of William T. McCullough, Cincinnati manager.

The giant General Electric turbine will be triple-compounded, it is stated. While it will be essentially one huge turbine, it will actually be made up of three separate units, superheated steam passing from one unit into the next. In this large engine, the electric power for the entire plant will be generated. The turbine will be located in a building to be erected south of the boiler structure.

Those who have examined the plans state that efficiency with which modern science and engineering operate is illustrated in the work of the plant. The heat capacity of the coal which will be used has been determined, and an effort has been made to account for every unit in the work of the plant. The only loss in heat units will be the slight loss which will, as it were, "go up the chimney" with the smoke.

Steam will start at 650 pounds pressure and 750 degrees temperature on its journey through the turbines. As the superheated steam expands to lower pressures and temperatures and as it passes through the turbines, it will be tapped off at various places for use in the plant. Thus if the steam is needed for some plant operation at a pressure of 450 pounds, the pipes will be tapped at the point at which this pressure has been reached and taken out.

The steam which has passed completely through the turbines, and from which has been removed amounts necessary at various temperatures and pressures, will be led into a drying room, where it will be employed in drying paper manufactured in the Hamilton plant. Not only the officials of the company but others who have knowledge of the plans, assert they can see no way in which greater efficiency of operation could be obtained. The Champion Coated Paper Company's plant, it is stated, will be as near 100 per cent efficient as it can be made.

The generators will be of special design to fit in with the highly efficient heat cycle. The boiler building, it is stated, will not have a single wasted cubic foot of space in it. All essential units have been placed on one floor, where they will be clearly visible to the man on the operating platform. Savings on space, and the efficiency of operation, will bring the cost of the plant to practically half of what such a development usually costs, it is pointed out.

The work of demolishing some of the old buildings to make way for the new began some time ago. Demolition of all buildings will be completed soon and the work of pouring concrete for foundations of the new plant will be started at the earliest moment, officials hope. It is expected that the new power plant will be in operation by February 1, next.

Babcock & Wilcox to Install Boiler

The F. K. Vaughn Company of Hamilton will handle the building construction part of the work. Babcock & Wilcox will install the boiler and the General Electric has the contract for the turbine.

Installation of the plant is part of the program to maintain highest efficiency and speed in the world's "largest coated paper plant."

Officials of the company declined to indicate what the improvements would cost. The city light plant with a capacity of only 13,500 kilowatts, however, cost more than $1,000,000.

The construction of the super-power plant which is designed to meet all future needs of the concern, so far as can be foreseen at this time, follows erection some time ago of a new office building, one of the finest of its kind to be found anywhere.

It is indicated that more than six months of research work was conducted before plans for the proposed Champion power house were completed.

Howard Smith Interests Acquire Canada Paper

Transaction Involves Exchange of 20,000 Shares of Canada Paper Co., for Similar Number of Howard Smith Paper Mills Common Shares—Properties Have Been Operated by Howard Smith Organization Since Beginning of Year—No Cash Transfer In Deal

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., July 22, 1929.—The Canada Paper Company has finally been acquired by the Howard Smith Paper Mills, all the legal details having been straightened out. The transaction involves the exchange of 20,000 shares of Canada Paper for a similar number of Howard Smith common shares. There is no cash transfer in the deal. The property has been operated by the Howard Smith organization since the beginning of the year.

Since that time the news print mill has been shut down entirely and production at Windsor Mills and St. Francis, concentrated on the manufacture of kraft paper, book and magazine paper and colored specialties. Four machines are in operation, two of which are turning out kraft, which is sold largely to Kilgour Bros., the Toronto unit.

The properties acquired are as follows: Units at St. Francis and Windsor Mills, P. Q., for the manufacture of news print, kraft and book papers; a paper box and specialty plant at Toronto, known as Kilgour Bros., Ltd.; 35,000 acres of freehold timber; a lease on an additional 200 square miles of timber; a small hydro-electric power plant producing some 6,000 h.p. at St. Francis.

The new officers of the Canada Paper Company are: C. Howard Smith, president; Harold Crabtree, vice-president and general manager; E. K. Robinson, assistant general manager; K. J. Pendock, secretary-treasurer; M. G. Peterkin, assistant secretary-treasurer. The directors are: C. Howard Smith, Harold Crabtree, F. A. Sabbaton, Arthur Cross, A. D. Emory, E. K. Robinson, E. Howard Smith, Jr., F. Campbell, H. B. Donovan.

Price Bros.' New Office

At a cost of approximately half a million dollars, Price Bros. & Co. are erecting a new head office building in Quebec, in which the various activities of the concern will be centralized. The building will be 246 feet high, having a depth and frontage of 80 feet. Fourteen-stories will be the height and it will be built entirely of stone on all four sides. The structure has been so designed to fit in with other outstanding landmarks in the ancient city of Quebec.

Fraser Issue Oversubscribed

An issue by the Fraser Companies, offered last week, was quickly oversubscribed. It consisted of $3,000,000 of 6 per cent 3-year collateral trust gold notes, convertible, at the owner's option into common shares at the rate of ten common shares for each $500 note, at any time prior to maturity.

Proceeds of the issue are to be applied toward construction at Athol, N. B., of a modern bleached sulphite pulp mill of 45,000 tons annual capacity, at a cost of approximately $4,500,000. The new mill, which is being erected by Restigouche Company, a wholly owned Fraser subsidiary, is to be completed and ready for commercial operation by January 1, 1930.

Canadian International Financing

One of the most important undertakings in the way of industrial financing which has been launched in Canada for some time was the offering during the past week of $25,000,000 of 6 per cent first mortgage gold bonds, due 1949, by the Canadian International Paper Company. The proceeds are to be used to repay a portion of the advances made to the company by International Paper Company, which has supplied substantially all of the funds expended by the company for the acquisition and development of properties.

For some time past, Canadian International Paper has been carrying out extensive development work at its Gatineau news print and Hawkesbury Kipewa bleached sulphite mills. Work on these units is now completed, or in the final stages, and these mills, including that at Three Rivers, have a combined normal capacity of 1,300 tons of news print and 420 tons of bleached sulphite pulp. Owing to the growing demand for bleached sulphite used in the manufacture of rayon, the company is now enlarging its Kipewa mill, which will add an extra 50 tons a day capacity for that product.

Giant Rayon Combine Reported

Canada is interested in the news that European interests are forming a giant rayon combine, owing to the report that "a powerful Canadian wood pulp concern" is said to be assured the new project. This Canadian concern is thought to be the Canadian International Paper Company, whose rayon pulp plant at Kipewa is one of the largest in the world, and whose product is mostly shipped to Europe. Another possible concern is the Fraser Companies, whose 45,000 ton mill at Athol will shortly be on a producing basis.

The combine was first broached a few months ago by the Federation International de Soie Artificiale, better known as Fisa. This concern which would sponsor the combine interests, is the holding and financing company formed by the late Alfred Lowenstein shortly before his death. It controls the Belgian Tubize Company and has an interest in German, Dutch and Polish rayon concerns as well. Since the death of Alfred Lowenstein whose International Holding Company holds 40 per cent of its stock, Fisa has continued to function and has formed financial interests with several powerful firms.

Sale of Power Plant

It is announced from Halifax that the Digby County Power Board has purchased for $50,000 from the Clyde and Sissiboo Pulp and Power Company lands, water and machinery on the Sissiboo River, negotiations for which have been pending for several months.

Says Paper Conditions Are Improving

[FROM OUR REGULAR CORRESPONDENT]

CORINTH, N. Y., July 22, 1929.—George Brooks, auditor of the Pulp, Sulphite and Paper Mill Workers' Union, is now engaged in making his annual audit of the books of the organization at the headquarters in the Laughlin Building. In discussing general conditions of the paper industry in this country and Canada Mr. Brooks said it pleased him very much to note the gradual improvement. "While the price of paper remains the same there is an increase in the number of machines in operation in the various mills of the country," he said, "and in some mills every machine is in full operation. Because of their closeness to the raw material Canadian mills show the most improvement but the improved business condition in the paper industry is not confined to any particular location and the whole industry shows improvement."

Mr. Brooks' work brings him in contact with mill conditions in all parts of the country and his long association with the paper industry adds much weight to a statement from him on general conditions in the industry. In the local area the industry is reported experiencing the best business conditions in several years. At Fort Edward and in this village the mills of the International Paper Company are being operated at capacity with all machines on full time. At the firm's plant in South Glens Falls, where a single product is made, conditions are said to be improving. The plant of the Union Bag and Paper Corporation, at Hudson Falls, also reports an upward trend in conditions with similar conditions also prevailing at the plant of Finch, Pruyn & Co.

Menasha Products Co. to Build Large Addition

Subsidiary of Marathon Paper Mills Company to Start Construction on Enlargement of Carton Department Shortly—Machinery Used in Present Carton Building Will be Moved to New Quarters—New Equipment Will be Added, to Modernize Business In Every Way

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., July 22, 1929.—Construction will be started about August 1 for a large addition to the Menasha Products Company, Menasha, Wis. a subsidiary of the Marathon Paper Mills Company. The enlargement of the carton department has made the step necessary, according to E. H. Lewandowski, vice president.

There will be a frontage of 300 feet on the new building and a depth of 120 feet. Part of the structure will be two stories, and the construction will be entirely fireproof. A warehouse site was purchased from the Menasha Wooden Ware Company, and a residence also was bought so as to provide sufficient land.

Machinery used in the present carton building will be moved to the new quarters, and some new equipment will be added so as to modernize this end of the business in every way, and provide for efficient operation. The old carton building, built many years ago, is to be razed.

There were rumors for some time that the company intended to move out of Menasha, but this announcement indicates its intention to remain there.

Wisconsin Carton Co.'s Plant Nearly Ready

Late in August the state's newest addition to the paper specialty industry, the Wisconsin Carton Company, of Stevens Point, Wis., will start operations. After about three months of remodeling and installing of machinery, a former tractor factory has been converted into a box factory with large scale production facilities. Cartons for butter and other foodstuffs will be the principal output at the start. The company will start with 38 employees, enough to run one complete unit of production.

A 30-ton press with a capacity of 48,000 one pound butter cartons per hour printed in two colors, has been installed. A cutting and creasing press weighing 20 tons is also a part of the equipment, as well as a gluing machine with a capacity of 100,000 cartons per hour. As soon as the plant is ready to start, a standard line will be printed and introduced to the trade. Efforts will be made to build up a demand for the standard sizes so as to provide basic production, and specialty lines then will be developed. A die making plant will be maintained, together with facilities for composition and mounting of electrotypes.

This company originally planned to locate a plant at Neenah, Wis., but has decided to sell a site which it owned there. The land was bought from the Valley Paper Mills Company, a concern which suspended operations after the foundation had been built for a mill. J. T. Mader, formerly of Appleton, Wis., is production manager of the company.

Fort Howard Improvements

All building and improvement operations are completed for the present at the Fort Howard Paper Company, Green Bay, Wis., according to A. E. Cofrin, general manager. The last of this work was the installation of a new turbo-generator with a capacity of 1,500 kilowatts. This equipment has met its final tests and is now carrying its full load in the mill operations. The mill is now served by the facilities of a new boiler house and a new power house.

Safety Council's Plans

C. R. Phenicie, general manager of the Wisconsin Public Service Corporation's division at Green Bay, Wis., has been made chairman of the Fox River Valley Safety Council for the next twelve months. The annual conference, usually held in the late spring, is to be at Green Bay next year and plans already are in the making for the program. W. J. Peacock, of the Northern Paper Mills, one of the leaders of the valley conference, is assisting in the plans.

Industrial safety continues to be the major objective of the council, but this year Green Bay will try out the suggested program of the national Safety Council with regard to community safety. This program includes traffic, juvenile safety, fire prevention and other related activities. The results will be recorded so the feasibility of the program may be shown to other co-operating cities of the valley.

News of the Industry

Rapidly increasing business of the Moloch Foundry and Machine Company, Kaukauna, Wis., has made it necessary to enlarge the foundry. A substantial addition is being built, the foundation of which is completed. Additional casting and finishing facilities will be supplied when the unit is ready for use. The company's 100 employees enjoyed an annual picnic recently. They spent a day at High Cliff Park, going there in automobiles.

J. G. Kimberly, vice president of the Kimberly-Clark Corporation, Neenah, Wis., has been elected commodore of the Neenah Nodaway Yacht Club, an organization of nautical enthusiasts. The club is arranging to sponsor the regatta of the Inland Lakes Yachting Association in 1930, one of the leading events each season in the boating world.

Announcement is made of the marriage of William Servotte, who is associated with the Bay West Paper Company, Green Bay, Wis., and Miss Agnes Sherman, daughter of the late John J. Sherman, banker, of Appleton, Wis. The couple will reside at Green Bay upon their return from a honeymoon trip.

C. H. Dexter & Sons Buy Oakland Div. Mill

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., July 23, 1929.—Announcement was made by the American Writing Paper Company the past week of the sale of its Oakland Division at Manchester, Conn., to C. H. Dexter & Sons, Inc., of Windsor Locks, Conn., manufacturers of a variety of papers.

The Oakland plant includes for equipment one 800 lb. and two 1,000 lb. beaters two Jordans and two 1,200 lb. washers. It has one combination Fourdrinier and cylinder machine, widest trimmed sheet 56 inches. The capacity is about six tons a day.

The sale was made through the real estate office of Nelson Smith of Hartford, Conn., and the papers passed through the offices of Gross, Hyde & Williams of the same city. There is but one more American Writing Paper Company mill outside of Holyoke to be disposed of and that is in Chester.

American Wire Cloth Co. To Build

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., July 15, 1929.—The American Wire Cloth Company, located at 1432 North Pitcher street, in a building leased from the American Signs Corporation, announces the completion of plans for the erection of a new plant, which is to be located in Parchment community.

The building will be 40 by 120 feet in dimensions, one story high. Standard mill construction will be employed, the exterior being of brick. This concern operates one loom for the manufacture of fourdrinier wires, also some special machinery for screens and specialties.

They are being crowded out of their present location by the expansion of the American Signs Corporation.

Demand for Paper is Spotty in Philadelphia

Local Distributors Report Drifting Tendency, While Manufacturers and Mill Representatives Enjoy Slightly Improved Request for Some Grades of Paper—All Divisions of Industry Experience Keen Competitive Bidding—Prices Fairly Well Maintained

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., July 22, 1929.—All divisions of the industry reported keen competitive bidding for the few orders of consequence that were to be garnered. Distributors reported a drifting tendency while manufacturers and mill representatives stated that there was a slightly improved market for certain grades of papers. Prices are fairly well maintained. Mills are co-operating with the distributors in holding to their values despite keen competition among the dealers.

Mills producing fine papers report a fairly good demand with orders sufficient to keep production at full time capacity for the next three weeks. There is a good demand for unfinished book papers, uncoated bristols, and for the better grades of writing papers, and mills and manufacturers representatives in the wholesale trade state business appears to be advancing. A few newer styles of paper were offered by manufacturers during the last fortnight after a dearth of such offerings this summer. This would indicate that the mills are prepared to go ahead with their Fall plans and are now seeking orders for the coming autumn requirements.

New Terminal Commerce Building Paper Center

When the proposed Terminal Commerce Building at 401 Broad street is completed next year there will be a centralized city structure which will be occupied by a group of paper houses now scattered throughout various sections of the business section. The first paper house to announce its removal upon completion of the new building was the D. L. Ward Company, which plans to assemble under a single roof its offices, sales department, warehouse, garage and shipping divisions. Last week the Charles Beck Paper Company, another old established fine paper house, confirmed its plans to remove to the new structure next year. Still another paper house has plans under way for occupancy of the Terminal Commerce Building when it is completed, but is not yet ready to make public its proposed change. There are several other paper houses that will shortly sign contracts for space in the building. This will give to the trade a centralized paper community where economy in overhead will greatly reduce the cost of business. There will be provided direct railroad communication for the shipment of paper with spacious loading and unloading platforms and accommodations for 140 trucks at a single time. The building is directly over the tracks of the Reading and Pennsylvania Railroads and but a short square from the main Philadelphia terminus of the passenger and freight stations of these railroads so that economy in transportation is provided. There are 32 acres of warehouse space provided in the mammoth twenty story structure with garage facilities for 600 cars. It is particularly adapted for industries such as the paper trade with all modern fire proof furnishings as well as efficiency services. The Charles Beck Paper Company, which has been organized since 1864, will occupy the third floor, where will be centralized its fine paper and box makers' paper distribution business and its subsidiary, the Charles Beck Machine Company, devoted to the manufacture and sales of its own patented converting machines for the box, wall paper and other allied industries, President Leon Beck, who has been touring Canada for the past two weeks, will return to headquarters here this week after a trip through Newfoundland and Nova Scotia. The Beck company has added to its lines the new Franklin Inlaid, made by the Franklin Paper Company, of Holyoke, Mass. The new papers are laid in casin Bristols uncoated in white and four colors.

Terminal Warehouse Fire

Following the disastrous fire which destroyed the huge Terminal Warehouse along the water front at Girard avenue, it was announced that the two paper concerns occupying the adjoining building belonging to the same owners had escaped serious damages by the efficiency of the fire fighters of the city. The two paper houses were the Huff Paper Company, with offices in the Denckla Building, and the Union Bag and Paper Corporation, Philadelphia branch, with offices in the Drexel Building. The fire was most disastrous because of the explosions that followed when chlorine and ammonia blasts hurled heavy obstacles for several blocks. There is a large area of space separating the two structures which enabled the firemen to protect the building occupied by the two paper concerns.

Reigel and Co. Inc., Adds New Lines

The long established house of Reigel & Co., Inc., has added a complete assortment of krafts. The newer lines that have been added recently are the Parsons Paper Company's high class superfine papers, L'Envoi, in white and laid and woven grades. Another addition is the paper made by the Appleton Coated Paper Company of Appleton, Wis., a polychrome coated enamel in white and colors. President Edward McCorkindale, who was elected head of the recently reorganized company, announced these innovations in line with the plans of the company to further extend its business at the time of its acquisition by associates of the old firm who have been selected from the ranks of its staff to take over the business. Arthur B. Sherrill, who has been sojourning in New England, will return to his desk August 1.

Wholesale Waste Merchants To Hold Outing

Plans for an outing have been announced by the Wholesale Waste Merchants of Philadelphia following the meeting of the members of the Wholesale Waste Merchants Association held in the Hotel Lorraine last Thursday evening. The outing will be held at Kugler's Mohican Club at Morris On The Delaware on August 14, and will be given over to enjoyment of outdoor festivities in the way of a picnic luncheon and dinner served in the Club and a program of sports and other outdoor diversions. The committee in charge of arrangements has been appointed with W. L. Simmons, Jr., of John Simmons Sons, chairman; William J. McGarity, Jr., of the Penn Paper and Stock Company, and George French, of the Philadelphia branch of Castle and Overton, active in planning for the coming event. The outing will bring together the various associates of all branches of the waste trade, including the wholesale paper stock dealers and rag merchants.

Harry L. Adler Back From Europe

Harry L. Adler, treasurer of the Huff Paper Company, who has been touring Europe the past two months, is at his desk again. In his tour of the Continent he visited the sight seeing centers of France, Belgium, Germany and Austria, and enroute homeward stopped in England to take in the leading cities.

George W. Ward Returns From Tour of West

President George W. Ward, of the D. L. Ward Paper Company, who has been making the rounds of the paper houses in the Middle West, will return to his desk today. He has been visiting all the leading cities in the section in a survey of the trade, having been absent for the past six weeks.

W. A. Coll & Co. Opens West Philadelphia Branch

W. A. Coll & Co. has opened a west Philadelphia branch house at 58th street and the Schuylkill River. The Coll company specializes in paper stock and the new warehouse supplements the one now occupied in the central section of the city. The head of the firm, William A. Coll, was recently elected president of the Phila-

delphia Paper Stock Dealers Association, organized last spring among the retail paper stock trade.

Hammersley Mfg. Co. Extends Staff

The Philadelphia offices of the Hammersley Manufacturing Company has extended its staff by the addition of another sales representative who will cover the local territory and the Eastern trade. William H. McKeever has been appointed assistant to Manager J. D. Ellis, who looks after Eastern Pennsylvania, New York, New Jersey and Delaware, representing the line of greaseproof papers produced by that manufacturer. Manager Ellis recently returned to Philadelphia after an absence of a few years spent in the West and reopened offices for the Hammersley company in the Drexel Bnilding. He was long associated with the local industry as manager of the Hammersley company before covering the western section of the country for that firm. In addition to representing the Hammersley Manufacturing Company in its line of greaseproof papers, he also carries the wax papers made by the Patterson Parchment Paper Company in this territory.

Fred Osborne With Hummel-Ross Co.

Fred Osborne, who has been connected with the paper industry for a number of years, has joined the Philadelphia office forces of the Hummel-Ross Manufacturing Company, associated with T. C. Hanna, manager of the Eastern trade territory. For several years Mr. Osborne has been associated with the manufacturing branch of the industry and within recent times with the sales division of a large paper manufacturer in the State. He will make his headquarters in the Eastern Sales Office of the Hummel-Ross Company at 437 Chestnut street and will represent the line of kraft paper and all sulphate boards in the general eastern trade.

Westinghouse Electric Equips Westvaco Mills

Electrical units for the operation of the drives in the plant of the West Virginia Pulp and Paper Company mills, located at Tyrone, Pa., have been installed by the Westinghouse Electric and Manufacturing Company, through the Quaker City branch. Several sectional paper machine drives have been installed in the Keystone State plant of the company and a new single motor paper machine drive is now being installed. Two turbine generator units have also been added to the Westinghouse electrical equipment of the mills. The single motor paper drive is of the type adapted for group drive of the paper machines.

Pennsylvania Wood Pulp Production Increased

Reports on the production of wood pulp in the State of Pennsylvania for the year of 1928 issued by the Department of Commerce, Washington, D. C., showed that there was a gain of 2,011 tons over 1927. Of the 4,510,800 tons of wood pulp produced in the United States in that year the Keystone State produced 218,598 tons. The total amount of pulp wood consumed in the country for the past year was 7,160,000 cords, as compared with 6,750,935 cords in the previous year, with Pennsylvania's consumption amounting to 405,276 cords, an increase of 7,255 cords over that of 1927. Maine led in production and consumption.

Blake, Moffitt & Towne Get Rodgers Co.

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., July 12, 1929.—The Rodgers Paper Company, founded in Salem, Ore., 43 years ago by the late George F. Rodgers, changed hands July 9 when Fred D. Thielsen turned over the controlling interest and management to Blake, Moffitt & Towne of Portland. The latter firm was represented by P. C. MacDonald of Astoria, a partner in the business and the new manager.

Mr. Thielsen has been with the company for 18 years, and is now turning his attention to a newly organized group which he heads called the Western Board Products Company. This concern will utilize the waste materials from the flax and paper mills for manufacturing purposes. Besides Mr. Thielsen, James G. Heltzel and F. Puttaert are other members of the Western Board Products Company.

J. A. Quinlan Heads Paper Committee

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., July 22, 1929.—Joseph A. Quinlan, traffic manager of the St. Regis Paper Company and its subsidiaries, was elected chairman of the pulp and paper committee of the Atlantic States Shippers Advisory Board at a meeting held during the week at Atlantic City. This is regarded as one of the highest honors that could be paid a member of the organization as the committee is one of the most important selected each year. During the week Mr. Quinlan with Attorney Wilbur La Roe appeared before the Interstate Commerce Commission at Washington to present final arguments in the Eastern Class Rate investigation, representing the Northern New York Development Association. The arguments presented to the commission were in behalf of all Northern New York as the outcome of the investigation is vitally important to that section. On Thursday, July 18, Messrs. Quinlan and La Roe appeared before the commission to present the final oral arguments in the complaint cases of the St. Regis Paper Company against a group of railroads including the New York Central, the complaint dealing with excessive freight rates for shipping wrapping paper from Northern New York to all points west of Buffalo. The complaint of the Taggart Brothers Corporation alleging excessive freight rates for the shipping of paper bags from Northern New York was also heard at the same time.

These two cases and also the complaint of the St. Regis Company against the railroad for excessive news print rates were heard about a year ago when hearings were conducted in Watertown and Washington. The hearing conducted in this city was the first appearance of the Interstate Commerce Commission in this part of the State. Mr. Quinlan stated that the news print case will not be linked with the other St. Regis case and the Taggart Brothers case mainly because of the general news print investigation which is being conducted by the commission and not yet completed. A hearing in this investigation is scheduled to be held at Plattsburg on July 22. Mr. Quinlan, whose offices were recently moved from this city to the main department of the St. Regis Company in New York City, will continue to represent the Northern New York Development Association and Watertown Chamber of Commerce in the cases brought before the Interstate Commerce Commission or Public Service Commission by these two organizations.

Bates Valve Bag Co. To Build in Los Angeles

LOS ANGELES, Cal., July 12, 1929.—Plans are now under way for construction of a new $250,000 paper bag plant, located at Medford and Eastern avenues, in the city industrial tract. The plant is owned by the Bates Valve Paper Bag Corporation, a subsidiary of the St. Regis Paper Company of New York.

When completed the new plant will employ approximately 150 people, give to Southern California one of the largest and most modern plants of its type and will be served by the Southern Pacific Company.

According to D. A. Fleishmann, manager of the paper bag concern, 107,000 square feet of property was purchased, on which they plan to erect a 360 by 160 foot building, equipped with the latest style machinery for manufacturing of heavy paper bags for cement, plaster and other products.

The building is being designed and constructed by the Austin Company, and will be a modern, daylight factory, built of steel, concrete and brick.

Harvey Paper Products Co. To Build

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., July 15, 1929.—The Harvey Paper Products Company, Sturgis, Mich., announces that the erection of a building 150 by 40 feet in dimensions, will start immediately. This is the second addition to the original plant made in the last eight months. This concern was started in Sturgis three years ago and now occupies about 12,000 square feet of floor space.

China Clay Pilot Plant Completed in Ontario

Work Commenced On Kaolin Brought From Mattigami River Properties to Determine Lines of Development For Large Scale Production—Good Results Said to Have Been Secured From Experiments Already Undertaken—Ground Wood Market Stabilized

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., July 22, 1929.—The paper trade in Ontario is interested in the fact that the Northern Ontario China Clay Corporation has completed the erection of a pilot plant for the processing of the output from its holdings and for the extraction of the various by-products by chemical means, china clay being one of the ingredients in the manufacture of coated paper. The plant, which is located on Power street, Toronto, is in charge of John G. Cloke, a chemist and metallurgist, who came to the city from Devon, England, to act as consulting and research chemist to the corporation. Work was commenced on a shipment of about thirty tons of fire clay and kaolin brought for the purpose from the corporation's properties on the Mattagami River to be used by Mr. Cloke for the purposes of demonstration and extensive tests, designed to determine the lines of plant development for large scale production at the property itself. Although only a few days have elapsed, it is stated that good results have been secured from the experiments already undertaken. The main products are fire clay, which is reported to be of the highest refractory type; kaolin, said to be equal in grade to the fine English kaolin, and silica sand, reputed to be of a purity hitherto unknown in bulk. In addition the promoters expect that the by-products will prove of great commercial value.

Paper Mulching in Niagara District

Professors A. H. Maclennan and T. H. Jones, of the Ontario Agricultural Department, and E. F. Neff, Lincoln County agricultural representative, are making a tour of Lincoln County where paper mulch experiments are being carried on. A number of vegetable growers around St. Catharines are conducting experiments on melons, peppers, corn, tomatoes and celery. The results of this year's experiments are being watched with interest by growers and the paper trade as well. In the meantime it is pointed out that at the Ontario Agricultural College, the Central Experimental Farm at Ottowa and other places where mulching vegetable crops with paper has been tried, the general concensus of opinion is that the process is too expensive. The paper is laid between rows of holes and punched in at intervals and in these the plants are set. No cultivation is necessary, weeds are absolutely checked and heat is conserved. The new system originated in the tropics where it has been used successfully. Of course paper mulch is a new thing in Ontario and some improvements in its use may be reasonably expected.

Cartel Helps Pulp and Paper Industry

A. Stewart McNichols, president of the Quebec Pulp and Paper Corporation, has just returned from a trip to England and France which took him away six months on business matters. Mr. McNichols stated that a cartel had recently been formed by the Swedish, Norwegian and Finnish ground wood producers for the purpose of controlling the output of mechanical pulp from these sources, as there has been in recent years a substantial overproduction which has adversely affected not only the European market, but also reacted to a certain extent against prices in Canada and the United States. Most of the ground wood mills in the countries in which the cartel has been formed are included in the organization and it is felt that the few that have not yet joined will be falling into line with time, as their attitude is said to be sympathetic toward the project. Already the coming together of the ground wood producers in the Scandinavian countries has had its effect in stabilizing the market, states Mr. McNichols. It is not expected, however, that radical changes will be made at the present stage. Efforts are tending more towards curtailing production at the mills, in order to limit the same market requirements. It is yet too soon to state whether this cartel will have much effect on the ground wood market in the United States in which Canadian ground wood mills are interested, except, however, that it will, no doubt, create a more optimistic feeling and possibly to some extent prove helpful in avoiding a repetition of the downward trend in the mechanical pulp market which has prevailed for the past few years.

Mr. McNichols stated that his company was operating only one mill at Chicoutimi at full capacity, but that the second mill at that point was closed down. The Val-Jalbert mill of the company has now been closed down for over two years and is being dismantled, so that this latter unit will no longer be a factor in the ground wood market. The company has only shipped a small quantity of ground wood to England, as the United States market has been taking up the balance of its output to the extent that the company's production is fully sold out up to the end of November, 1929. There has been some firming up in demand for ground wood of late, and it is expected that this improvement will be maintained, and possibly further accentuated, as contracts are renewed for future ground wood deliveries. Mr. McNichols found that conditions have been improving considerable in the news print trade, both in England and France, and the tendency appears to be toward still further improvements in this direction.

Westminster Paper Plant Destroyed

Word reached Toronto this week of the destruction by fire a few days ago of the plant of the Westminster Paper Company, Ltd., at New Westminster, B. C. The loss is estimated at $1,000,000 and is said to be pretty well covered by insurance. The same fire spread to a part of the Triangle Chemical Company, causing $250,000 there. The Westminster Paper Company, Ltd., was formed some years ago by J. J. Herb, former superintendent of the Interlake Tissue Mills, Ltd., at Merritton, Ont., for the manufacture of kraft, sulphite wrappings, tissues, covers, etc. Light weight papers were the chief line. R. F. Arnett is the vice-president of the company, with H. M. Lord as secretary-treasurer. Mr. Herb is the president of the company. It is understood that steps will be taken at once toward rebuilding.

New Moore Factory for Toronto

Complete conversion by stock holders of Gilman Fanfold Corporation, American Sales Book and Pacific Burt Company into stock of the Moore Corporation, which is now almost finished, will pave the way for an expansion of the amalgamated concerns' interests in Toronto. The offer made by the Moore Corporation to acquire the sales book and continuous form division of the F. N. Burt Company, on a transfer of stock basis, is now being worked out. When this has been arranged the Moore Corporation plans a considerable enlargement of this type of their business, which may result in the erection of a new factory in Toronto for that purpose. The sales book division represents about a tenth of F. N. Burt's total business, but has grown so greatly in recent months that an immediate expansion is thought necessary. An official announcement a few days ago indicated that the full 100 per cent of common and over 99 per cent preferred of Gilman-Fanfold had been converted, and approximately 98½ per cent of American Sales Book and Pacific Burt stock had been received. The balance of the shares is in the hands of a very few people who have expressed their willingness to convert as soon as some minor legal obstacles have been overcome. On completion the Moore Corporation will then have outstanding $3,073,000; 7 per

cent convertible $100 par preferred, $2,500,000; 7 per cent convertible $100 par second preferred and 282,340 ordinary shares of no par value. To this will be added something over 80,000 shares given to F. N. Burt in exchange for the portion of business to be acquired. The erecting of a plant in Toronto for sales book and continuous form production would give the Moore Corporation its first real foothold in Canada, as its other factories are located in the United States. F. N. Burt operates plants in Toronto and Buffalo for the manufacture of paper boxes.

Fighting Northern Ontario Fires

At least 2,000 men are engaged at this moment in the fight which the Provincial air and land fire-fighting ranging services are waging against the scores of fires which have broken out in the heat-dried forests of North and Northwestern Ontario. Spread through the wilds of the Kenora, Rainy River and Patricia districts the land crews have been so busy that they have not had time to make their customary reports to the Parliament Buildings in Toronto. From meager information received, the officials are convinced that the long weeks of drought have produced the worst season for fire hazard ever encountered in Ontario. A special report on the situation is being forwarded to the office of the Minister of Lands and Forests. Eleven planes have been engaged in the fire-swept area, and their activities have been such that in the week ending June 15, with reports not then complete, the total flying time of the whole service had been brought to above 500 hours. This beats the record set the previous week when the service flew a total of 498 hours, or 45 hours more than the former mark laid in August of last year.

Notes and Jottings of the Trade

D. B. Chant, of the Sault Ste. Marie Division of the Abitibi Power and Paper Company, has been appointed assistant general superintendent of the Espanola division. Mr. Chant is an old Espanola boy, having been a paper maker on the machines in that town some years ago, later being appointed labor supervisor at the mill. When Roderick Olzendam, secretary of industrial relations for the old Spanish River mill, resigned to take a position with an American firm, Mr. Chant was appointed to Mr. Olzendam's post with an office at the Soo mill. Many friends are congratulating him on his promotion.

Keen on seeing how paper is manufactured, a party of about 300 Winnipeg business men and members of the Manitoba Legislature visited the big plant of the Manitoba Paper Company at Pine Falls recently. In addition to going through all departments of the mill the visitors made an inspection of the model town the company has built and returned to Winnipeg in the evening greatly impressed by the magnitude of the plant and the appearance of the town. The party was organized at the invitation of the Manitoba Paper Company by the Winnipeg Board of Trade and included representatives of the Carman and Selkirk boards, as well as members of the senior and junior sections of the Winnipeg organization.

Another chapter in the protracted litigation between the Inglewood Pulp and Paper Company and the New Brunswick Power Commission was written at Fredericton recently when the appeal division of the Provincial Supreme Court rejected the appeal of the paper company against a verdict from the King's Bench Division. The verdict had assigned damages for lands expropriated by the power board, in conjunction with the Musquash province owned power development. The appeal was dismissed with costs. This chapter is an echo of the suit for $840,000 instituted by the Inglewood interests, which action met with failure.

George L. Carruthers, son of George Carruthers president and general manager of the Interlake Tissue Mills, Ltd., has been transferred from the mill at Merritton, Ont., and has joined the sales force of the company at Toronto.

Harold Crabtree, vice-president of the Howard Smith Paper Mills, Montreal, and J. B. Larkin, of the Federal Paper Company, were business visitors in Toronto this week.

C. C. Heritage Goes With Oxford Paper Co.

MADISON, Wis., July 22, 1929.—Clark C. Heritage, chemical engineer in charge of the section of Pulp and Paper of the Forest Products Laboratory, left the laboratory July 18 to join the technical staff of the Oxford Paper Company at Rumford Falls, Me.

Mr. Heritage, who has been in the pulp and paper industry and allied fields since 1914, came to the Forest Products Laboratory in October, 1927, with an impressive record in development work in the pulp and paper and chemical fields. During the war period and up to 1925 he was engaged in engineering and development work for the Schoellkopf Aniline and Chemical Works and the National Aniline and Chemical Company in Buffalo, N. Y.

During Mr. Heritage's administration of the federal laboratory's

CLARK C. HERITAGE

pulp and paper section outstanding research accomplishments have included the production of papers of commercial grade from little-used hardwoods by the sulphite and semi-chemical processes, and from the pines through easy bleaching sulphate, the production of high yield semi-sulphite papers, the utilization of seed flax straw for high quality strong, white papers, and new additional methods for evaluating ground wood pulps.

Miami Paper Shippers Meet

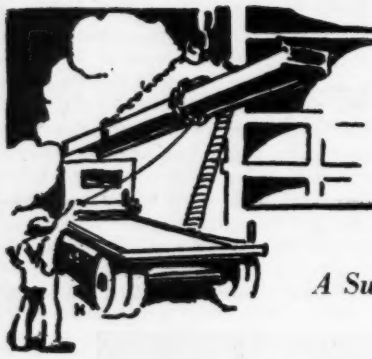
DAYTON, Ohio, July 22, 1929.—The Miami Valley Paper Shippers Association held a meeting Thursday night, July 18, at Middletown for the discussion of topics of interest to the trade.

The matter of consolidating shipments into carlots, the principal object of the formation of the organization, was given extended consideration by the members who comprise representatives of most of the leading paper mills in the valley.

It is stated that the organization of such a body was essential to bring about economies in the handling of shipments and that since the association has boosted its own cause so vigorously, manufacturers are finding it convenient to make up car loads and thus obtain more favorable freight rates and more expeditious handling of orders.

Some mill men reported it was necessary to do considerable hustling to obtain the elusive order at this time, especially some bond and writing paper representatives, while wrapping and printing paper men reported they were doing a good business.

Charles J. Nichols, of the Sorg Paper Company, Middletown, is president of the Association; Norman C. Sullivan, located in the Civic Association building, Middletown, secretary; Robert Smith, of the Wrenn Paper Company, Middletown, treasurer, and W. W. Winship, of the Oxford Miami Paper Company, vice-president.



CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Pittsburgh, Pa.—The Keystone Box Company, Twenty-eighth and Smallman streets, manufacturer of paper boxes and containers, has awarded a general contract to Cuthbert Brothers Company, Bessemer Building, for proposed new addition to plant, to be three-story, brick and steel, 50x100 feet, estimated to cost about $65,000, with equipment. Superstructure will be placed under way at once. Peter Dietz, Lyceum Building, Pittsburgh, is architect and engineer.

East Rutherford, N. J.—The Flinkote Company, East Rutherford, has plans for a new addition to their local mill for increased capacity of roofing papers, etc., to be two-story, repored to cost more than $45,000, with equipment. It is understood that Ferber Construction Company, 16 Johnson avenue, Hackensack, N. J. will be selected to erect the unit.

Windsor Locks, Conn.—The American Writing Paper Company, Holyoke, Mass., has concluded negotiations with C. H. Dexter & Sons, Inc., Windsor Locks, manufacturer of specialty paper goods, for the sale of its local mill, closed down for about two years past. The purchasing company will take early possession and will use the property for expansion in present output. The plant, heretofore, was known as the Oakland Division of the American Writing Paper Company; only the mill used for the Chester Division now remains to be disposed of in accordance with the reorganization plan of the company.

Monroe, La.—The Brown Paper Mill Company, Monroe, is said to be planning early purchase of a considerable quantity of equipment for proposed new additions to mill, including sulphate machinery, power apparatus, transmission and conveying equipment. The new unit will comprise a group of buildings; estimated cost is placed at close to $4,000,000, with machinery. George F. Hardy, 309 Broadway, New York, is architect and engineer for the work.

Wilson Borough, Pa.—Pac-Kups, Inc., care of Frank Hazzard, R.F.D. No. 4, Easton, Pa., recently formed by Mr. Hazzard and associates, is said to be planning the early operation of a local plant for the manufacture of paper containers of different kinds, paper cups, etc. Walter B. Scott, 128 Porter street, Easton, is also interested in the new organization. Mr. Hazzard will be treasurer.

Detroit, Mich.—The National Automotive Fiber Company, Detroit, manufacturer of fiber specialties for automobile service, has awarded a general contract to the H. G. Christman-Burke Company, Stevens Building, Detroit, for construction of a proposed new plant on 10-acre tract of land recently acquired at State Fair avenue and the line of the Grand Trunk Railway, to consist of a number of buildings, reported to cost about $85,000, with equipment. Work will be placed under way at once. I. M. Lewis, Congress Building, Detroit, is architect.

Jersey City, N. J.—The Forney Fiber Company, 93-97 Boyd avenue, Jersey City, which recently acquired the former plant of the American Motors Company, West Front street, Plainfield, N. J. has arranged for the sale of its Jersey City property to the A. Deming Company, Inc., which will use the factory for another line of manufacture. The Forney company will vaçate at the earliest date, and resume production at the Plainfield site, with increased equipment for larger output. A larger working force will be employed. The company is affiliated with the Sonoco Products Company, Hartsville, S. C.

Niagara Falls, N. Y.—The former plant of the Porter Fiber Bottle Company, Old Guard street, Lewiston district, was partially destroyed by fire recently with loss reported at $15,000. The property has not been occupied recently and no announcement has been made regarding rebuilding.

Tuscaloosa, Ala.—The Champion Fiber Company, Canton, N. C., is reported to be considering the construction of a new mill in the vicinity of Tuscaloosa, where inspection has been made of a number of sites. Options are said to have been taken on a considerable acreage, with water frontage, with early decision to be made by the company. Production will be given over to kraft papers, as well as other stocks. No details regarding the project are as yet available.

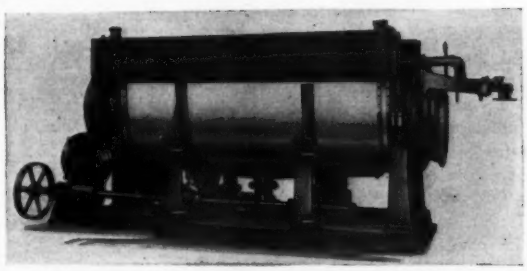
New York, N. Y.—The Rapid Paper Box Company, Inc., 139 West 19th street, recently organized under state laws, will take over and expand the company of same name at address noted. Increased operations will be arranged. The incorporators of the new concern include Jacob and David Friedman, 675 Caldwell avenue, Bronx.

Muskegon, Mich.—The Michigan United Paper Company, Muskegon, recently formed as a Middle West subsidiary of the United Paper Company, East Braintree, Mass., with capital of $50,000, is running on a full capacity schedule at its local plant, with output devoted to paper box and carton stocks, car and carpet wrapping papers, bailing papers, insulating stock, and roofing papers. The present output is on a basis of about 20 tons per day, and will be maintained at that point for an indefinite period. Raw paper stock is being secured from the mill of the Central Paper Company in the immediate vicinity. The plant occupies about 20,000 square feet of floor space in the former building of the Muskegon Extract Company, and will likely increase production facilities under present expanding demand. John F. Brennan is manager of the plant.

Richvale, Cal.—The Pacific Coast Pulp and Paper Corporation is arranging to lay foundations at once for its proposed new local mill, to be given over to the production of rice straw papers. General contract recently was let to the Charles S. Mabrey Company, Inc., Fourth and J streets, Sacramento, Cal. Initial units will consist of a one-story main mill and machine department, 60x225 feet; two-story beater room, 75x120 feet; one-story boiler plant, 50x90 feet, and office, and is estimated to cost about $400,000, with machinery. Other units are projected at a later date. It is expected to give employment to more than 100 men when the plant is opened. C. A. Kieren is general manager, and will supervise construction work.

Pittsburgh, Pa.—The F. J. Kress Box Company, 2930 Liberty avenue, has begun production in its new plant on 28th street, fronting on the Allegheny River, recently completed, for the manufacture of corrugated shipping containers. The mill has been designed for straight-line manufacture under continuous operation from the feeding of raw material to the delivery of completed

The BIRD SCREEN



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boxes at the shipping platform. It is one-story, covering about 2 acres of land and represents an investment of close to $1,500,000, with machinery. About 25,000 square feet of floor space has been arranged for the storage of raw material. The company will develop maximum output at the mill at an early date, and will give employment to a large working force.

Mobile, Ala.—The International Paper Company, 100 East 42nd street, New York, is completing the construction of its new mill at Mobile, to be used for the manufacture of kraft papers, and will provide full equipment in all divisions for maximum production. It is understood that the plant will be ready for service at an early date and that a working force will soon be recruited. The mill will represent an investment in excess of $5,000,000, including ground, buildings and machinery.

New Westminster, B. C.—The Westminster Paper Company, New Westminster, is said to be arranging for the early rebuilding of the portion of its mill destroyed by fire, July 13, with loss reported at close to $1,000,000, including machinery. Reconstruction is expected to cost close to a like sum.

Montreal, Que.—The Canadian International Paper Company, Montreal, affiliated with the International Paper and Power Company, and the International Paper Company, New York, is disposing of a bond issue of $25,000,000, a portion of proceeds to be used for general operations and expansion. The company is operating news print mills at Three Rivers and Gatineau, Que., with gross rating of 1,300 tons per day; a mill for the production of bleached sulphite pulp at Kipawa, Que., and similar plant at Hawkesbury, Ont., with combined present output of 420 tons per day. Work is under way on an addition to last noted plant to develop an increase of about 50 tons of sulphite pulp daily, a considerable portion of which will be utilized for rayon manufacture by outside interests. A. R. Graustein is president.

Toronto, Ont.—The Canadian Paper Board Company is planning the early rebuilding of portion of mill destroyed by fire, July 6, with loss reported at about $12,000, including equipment and stock.

New Companies, Inc.

Chelsea, Mass.—The Myers Paper Stock Company has been incorporated with a capital of 5,000 shares of stock, no par value, to deal in paper stocks. Benjamin Myers, 104 Cottage street, Chelsea, is president and treasurer.

New York, N. Y.—The Harris & Paul Paper Company, Inc., has been incorporated with a capital of $10,000 and 1,000 shares of common stock, no par value, to manufacture and deal in paper goods. The company will be represented by Holmes, Paul & Havens, 15 William street, New York, attorneys.

Chicago, Ill.—The Eagle Envelope Company, 417 South Jefferson street, has been organized to manufacture and deal in envelopes and other commercial paper products. The incorporators are J. H. Redson, E. G. Rice and M. R. DeTolve.

New York, N. Y.—Berne & Stanley, Inc., has been incorporated with a capital of $20,000, to manufacture and deal in paper boxes and containers. The company is represented by William Gellin, 353 Fifth Avenue, New York, attorney.

New York, N. Y.—The Inland Paper Board Company, manufacturer of paper board and kindred products, has filed notice of increase in capital from 13,000 to 50,000 shares of stock, no par value, for expansion.

New York, N. Y.—P. Colabella, Inc., has been incorporated with a capital of $20,000, to manufacture and deal in paper products. The company is represented by Goldstein & Goldstein, 291 Broadway, New York, attorneys.

Newark, N. J.—The Chesler Paper Bag Company, 80 Commerce street, has filed notice of organization to manufacture and deal in paper bags and containers. T. Chesler heads the company.

New York, N. Y.—The G. S. Larkin Paper Company has been incorporated with a capital of 100 shares of stock, no par value, to manufacture and deal in paper goods. The company is represented by Burnestine & Geist, 276 Fifth avenue, New York.

New York, N. Y.—The Cornstalks Products Company 42 Broadway, has filed notice of increase in capital from 300,000 to 625,000 shares of stock, a portion of the proceeds to be used for general expansion. The company operates a mill at Danville, Ill., for the manufacture of paper from cornstalks under a special process.

Chicago, Ill.—The L. M. Stein Company, 426 South Clinton street, has been incorporated with a capital of $75,000, to manufacture and deal in loose leaf paper products of various kinds. The incorporators are L. M. Stein, M. P. Levine and John Flusek.

National Paper Products Gets Toilet Patent

Announcement has been made in San Francisco that the Crown Zellerbach Corporation, through its subsidiary, the National Paper Products Company, has acquired the patent rights to self-disposing toilet seat covers designed to supplement its present line of sanitary products. The Zetex Corporation will be exclusive selling agents for the United States for Zetex and Slip Away self-disposing toilet seat covers manufactured by the National Paper Products Company.

The tissue for the product will be produced in Crown Zellerbach mills in Washington and Oregon and it will be converted by the DeWaide Conversion Corporation, Portland, Ore. Tissue stocks for the Eastern market will be drawn from the Crown Zellerbach mills at Carthage, N. Y., and conversion plants will be established on the Atlantic Coast and in the Middle West.

Widespread markets are available for the product as shown by surveys made by paper jobbers throughout the entire country. It is anticipated that minimum gross sales of approximately $14,000,000 will be made during the life of the contract.

The Zetex Corporation will have offices in Tacoma, Wash., San Francisco, Cal., and another is to be opened in New York to care for the Eastern business.

L. J. Arms, sales manager of the San Francisco division of the National Paper Products Company, is a director of the Zetex Corporation, of which L. A. Love, Tacoma, is president; Vaughan Morrill and John Condon, both of Tacoma, vice presidents, and C. E. Wakefield, Seattle, secretary.

News of the Boston Paper Trade

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., July 22, 1929.—The latest development in Crinoline Text manufactured by Tileston & Hollingsworth Company, is a new size and weight, 25x38—70. This paper is available in all colors and finishes and is in step with the design to make Crinoline Cover and Text a highly flexible paper.

Hollingsworth & Vose Company has ordered five new beaters from E. D. Jones & Sons Company, for the East Walpole factory. J. H. Horne, of Lawrence, Mass., is constructing a three cylinder paper machine for Hollingsworth and Vose Company for making rope and jute papers. The company with its new machinery, will be able to increase the capacity of its mills 30 per cent.

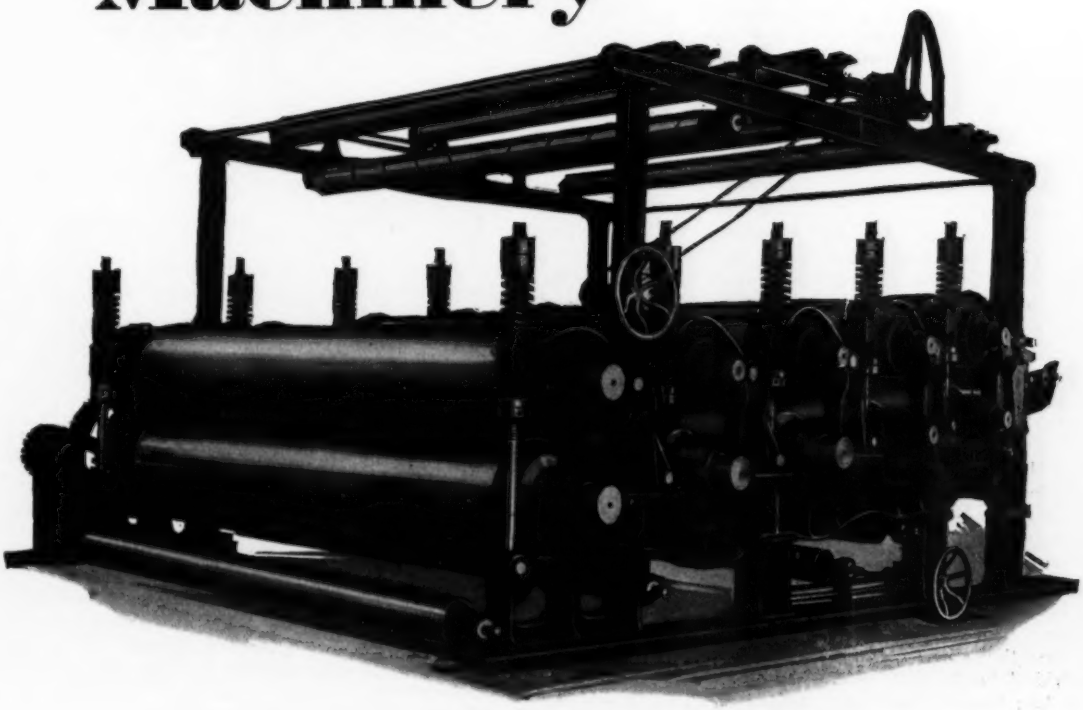
Albert W. Guild, salesman for Baird & Bartlett Company, box board dealers, has gone to Portland, Me., for a vacation. Warren D. Thompson, who has a similar position with the same firm, has gone to Waterford, Me., accompanied by his family, for a two weeks' vacation.

Frank Sharples, sales manager for the Wabash Coating Mills Division of the United Paperboard Company, is visiting the Boston agency of the company this week and calling on the trade here.

Charles Robertson, well known in the trade, formerly a paper manufacturer at Bellows Falls, Vt., is in Boston for a few days with his family and is staying at the Hotel Statler.

The Inland Paper Board Company, Inc., whose offices are at Norwich, Conn. has filed notice of increase in capitalization from 13,000 to 50,000 shares of no par stock.

Insulating Board Machinery



PRESS PART

If you have waste fibres of any kind, such as chips, saw mill waste, pulp screenings, corn stalks or bagasse, this new industry should interest you. The waste is handled raw in well proved grinding machines, or perhaps semi-cooked before grinding but so free as to be hardly pulp at all in a paper making sense. A *continuous* sheet without laminations is formed, pressed and dried to ½" or more in thickness, 8 ft. or 12 ft. trimmed width. Sheet must be handled carefully to prevent crushing and must be kept in a perfectly straight line until finished. Drying is continuous and even with a surprisingly low steam consumption. Complete semi-commercial laboratory available for tests.

DOWNINGTOWN MFG. CO.
DOWNINGTOWN, PA., U. S. A.

Special Numbers

Reviewed by Clarence J. West

This year the Verein Deutscher Papierfabrikanted held their meeting in Danzig, and as usual the two German paper magazines, Der Papierfabrikant and the Wochenblatt für Papierfabrikation, issued special numbers in celebration of this event. As usual, also, they are very pretentious issues, the Fest- und Auslandheft of Der Papierfabrikant consisting of 304 pages, of which 95 pages are text, while the Sondernummer of the Wochenblatt consists of 320 pages, of which 144 pages are text. These are made possible, in part, by the large volume of advertising which they carry; these advertising pages give one a very good idea of German firms which are supplying machinery and raw materials to pulp and paper manufacturers and converters.

A brief survey of the contents of these two special numbers will be given below; abstracts of these articles will appear in due time in the Technical Section of the PAPER TRADE JOURNAL.

Der Papierfabrikant

The special number of Der Papierfabrikant opens with an illustrated description of the city of Danzig, by M. v. Wussow; C. Lammers then discusses the place of Danzig in the world of trade. Walter Sembritzki gives a sketch of Karl Kellner, 1850-1905, who is best known as the co-inventor of the Ritter-Kellner cooking process. Friedr. von Hössle, the well-known German authority on the history of papermaking, presents another article on watermarks, of which there seems to be no end. L. J. Dorenfeldt presents a program for the study of pulp production by means of sodium bisulphite, which he prepared in 1922; this is of special interest because of the present study on the replacement of calcium by sodium in sulphite cooking liquors. K. G. Jonas describes the pulp and paper laboratories of the "Institutes für Cellulosechemie" of the Technischen Hochschule Darmstadt. H. Suida, H. Sadler and F. Noss report their results on the study of the digestion of straw with nitric acid; 130 digestions were carried out, using a cooking liquor containing from 1.4 to 10.8 per cent of nitric acid. The average yield of pulp was 50 per cent; this pulp could be bleached normally, with the usual consumption of chlorine. The modern screen is discussed by A. Danninger. Mirus gives the following figures for the consumption of paper, per individual, in different countries: United States, 62 kg; England, 37 kg.; Germany, 26.5 kg.; Holland 21.5 kg.; France and Sweden, 20 kg.; Switzerland and Belgium, 19 kg.; Norway, 14.5 kg.; Austria, 14 kg.; Finland, 11 kg.; Japan, 10.5 kg.; Italy, 9 kg.; Spain, 6 kg.; Russia, 3 kg. Erich Stenger discusses methods of photographing watermarks. R. Rassow and Fritz Weber present an abstract of their study of the behavior of cotton towards glycol and glycol-hydrochloric acid. Arthur St. Klein deals with the development of the continuous wood grinder. The influence of sap brown dyeing upon the strength properties of paper is reported by Albert Schlatter; the use of 7.5 per cent dye appears to produce the maximum effect; paper with and without sap brown gave the following values: tearing resistance, 6.1 and 5.6 km.; Mullen test, 5.9 and 5.5 kg. respectively. Albert Küng and Ernst Seger describe a simplified method for determining the strength of cellulose and compare the results with those obtained by using the method proposed by the German Commission. Heinrich Kirmreuther discusses the use of sulphite alcohol as a motor fuel and the preparation of absolute alcohol. The recovery of pure sodium hydroxide from waste mercerizing liquids, containing colloidal materials, by diffusion (Cerini's method), is discussed by O. Faust. A new form for carrying out the copper number determination is proposed by K. G. Jonas and A. Drössel. Rudolf Lorenz reports experiments on the influence of mixtures of electrolytes on rosin flocculation. Ernst Graap has developed a new method for the analysis of calcium in sulphite cooking liquors by the use of potentiometric measurements. Hans Rinderknecht presents a discussion of the present state of power and heat economy in the paper industry. Lorenz Kiessling has an article on the automatic regulation of electrically driven grinders and P. Weiske and K. Rupprecht one on the electric control for multiple drive paper machines.

Turning now to the Sondernummer of the Wochenblatt, we find that Heino Castrof presents an illustrated description of the city of Danzig. Since this is the 60th year of the Wochenblatt, there very appropriately follows a brief story of the growth of the magazine, which was founded in 1870 by Heinrich Güntter; a list of the books published under the auspices of the magazine is included, many of which were published serially before being put into book form. Later in this number there appears a bird's-eye picture of the many articles which have been published during these 60 years; it is, naturally, a list of the many well-known German names prominent in the development of the paper industry. This number also contains an article on watermarks by Friedr. con Hössle. Reiferste gives an illustrated description of the manufacture of hand made paper in Japan. Carl Strobach begins a series of articles on the duties of the manager and his assistants. Alois Danninger discusses wood measurement and handling in pulp and paper mills . K. G. Jonas and H. Kross briefly consider the determination of the strength of pulps. Arthur St. Klein gives figures on the cost of wood and pulp, comparing costs in different countries. Ulrich Kirchner presents an illustrated description of the Institut für Cellulosechemie der Technischen Hochschule Darmstadt. Walter Brecht traces the development of the automatic regulation of the screen on the paper machine. Müller and Walter give a critical review of the technical development of the sulphite process, based upon recent literature. Rudolf Lorenz discusses the role of aluminum sulphate in rosin sizing. Mirus gives production statistics for paper, boards and pulp for the world; in 1800 the paper production was 10,000 tons; in 1900, 8,000,000 tons; in 1910, 9,000,000 tons; in 1920, 12,500,000 tons; in 1925 16,000,000 tons. Ferd. Schiller presents the recent advances in multiple motor drives. G. Lest discusses the different systems of high pressure steam production. Paul Klemm has a paper on the two-sidedness of paper. Finally P. Weiske and K. Rupprecht consider multiple drives with electric controls.

These two numbers are very welcome additions to the literature of papermaking.

Paper Mill Officials Injured in Autos

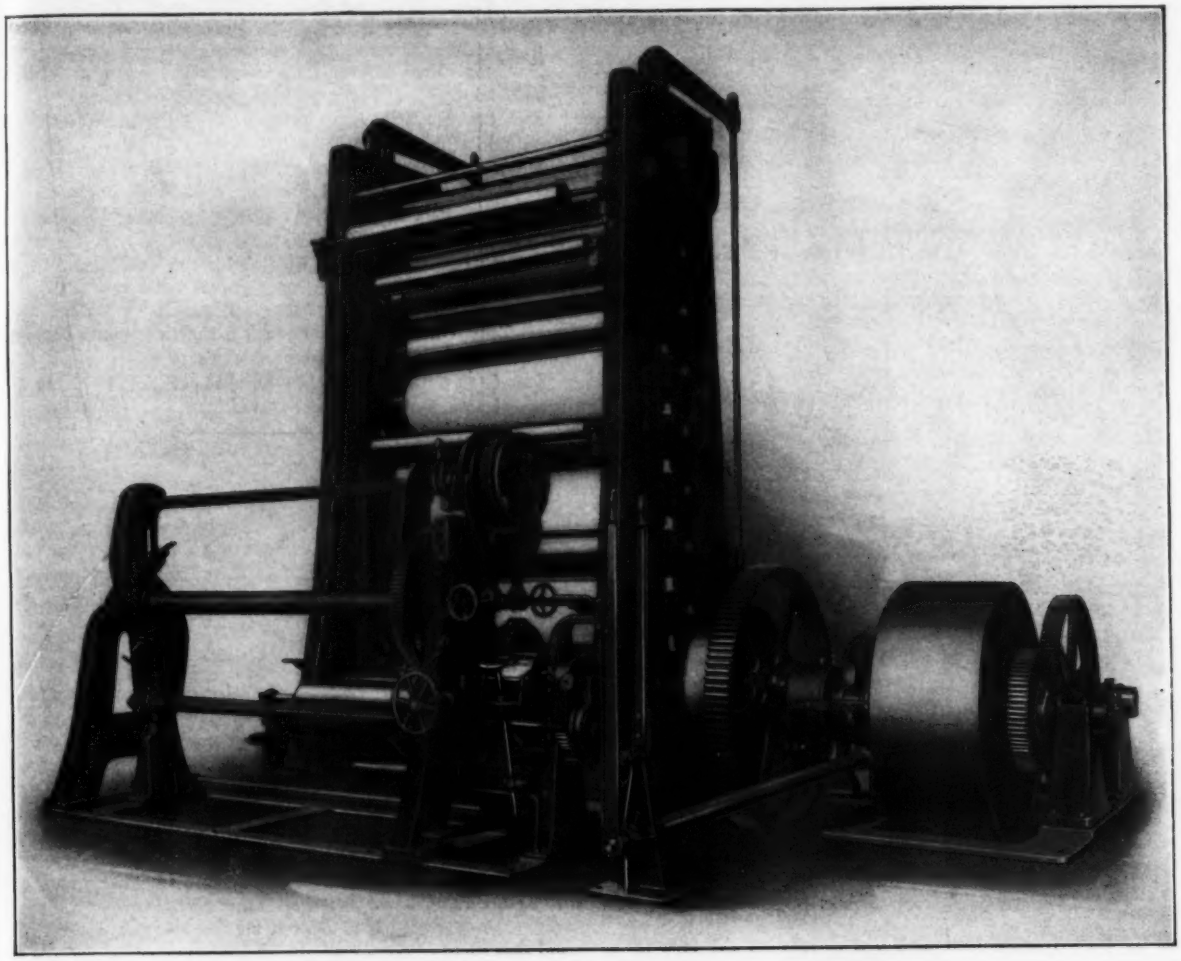
[FROM OUR REGULAR CORRESPONDENT]

BROWNVILLE, N. Y., July 15, 1929.—As a result of injuries suffered while riding in a taxi Ralph E. Skinner, secretary of the Harmon Paper Company, is confined to a hospital in New York City. He was riding from the Roosevelt Hotel to the Pennsylvania terminal to take a train for Philadelphia when the taxi was caught in a jam and crushed against a pillar of the elevated railroad. He received two broken ribs, several cuts about the head and an injured back.

Largest Envelope Airmailed to President

To welcome the country's chief executive to the National Air Races, to be held in Cleveland, August 24, a special Airmail plane was needed to dispatch the invitation—it being a jumbo invitation signed by thousands of Cleveland school children, mailed in a Silvertone envelope, measuring two and a half feet by five feet, the largest envelope ever handled by the Postoffice Department. The envelope was manufactured by The Standard Envelope Manufacturing Company of Cleveland. It required $16.45 postage.

"NO CALENDER CAN BE BETTER THAN THE ROLLS IN IT"



PERKINS 66" 9-ROLL WEB SUPERCALENDER

Always built to a standard—never to a price.

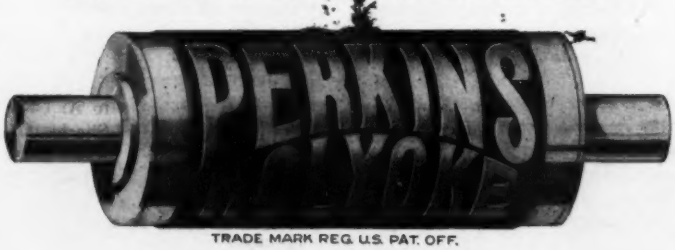
Every Perkins Calender is designed to meet exactly the requirements of the industry, heavier and more rugged than the commonly accepted practice.

The Perkins 66" 9-Roll Web Supercalender illustrated is equipped with mechanical drive, single belt type. It is a machine that will live up to the high reputation established by Perkins Rolls which for more than fifty years have been the accepted standard of perfection.

B. F. Perkins & Son, Inc., Holyoke, Mass.

ENGINEERS and MANUFACTURERS

COTTON ROLLS
PAPER ROLLS
EMBOSSING ROLLS
CHILLED IRON ROLLS
GRANITE PRESS ROLLS
WEB SUPERCALENDERS
GLASSINE SUPERCALENDERS
FRICTION CALENDERS



TRADE MARK REG. U.S. PAT. OFF.

EMBOSSING CALENDERS
SHEET CALENDERS
PLATERS
MULLEN PAPER TESTERS
TENSILE TESTERS
VENTILATING FANS
RAG CUTTERS
STOCK CUTTERS
PAPER DAMPENERS
BLEACH EJECTORS

Trade Mark Department

CONDUCTED BY NATIONAL TRADE MARK CO., WASHINGTON, D. C.

The following are trade mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., trade mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

FLEUR-DE-LYS—No. 279,368. Waltham Bag and Paper Company, Waltham, Mass. For paper bags and package-carrying envelopes.

RONOFILE—No. 281,697. Earl A. Robinson, Los Angeles, Cal. For paper filing cases and folders.

CRETON—No. 283,000. The Peerless Paper Mills, Inc., Oaks, Pa. For toilet paper.

GAUZE—No. 283,800 (written on a blue background with a white cross). Northern Paper Mills, Green Bay, Wis. For toilet paper.

AMOSKEAG—No. 284,222. The Daniels Cornell Company, Manchester, N. H. For toilet paper.

ALOHA—No. 283,095. Theo. H. Davies & Co., Ltd., San Francisco, Calif. For bond paper.

W—No. 283,162. Western Waxed Paper Company of Oregon, Portland, Oregon. For gummed sealing tape.

DOPACO—No. 283,443. Downingtown Paper Company, Downingtown, Pa. For paperboard.

SANEX—No. 283,516. The Sanex Co., Chicago, Ill. For poultry paper.

VISOLITE—No. 283,709. S. D. Warren Company, Boston, Mass. For transparent paper.

TWILLFOLD—No. 283,710. S. D. Warren Company, Boston, Mass. For printing paper.

NOR-FOLD—No. 283,799. Northern Paper Mills, Green Bay, Wis. For paper towels.

TRANS-VEL—No. 283,889. Neypaco Paper Company, Inc., New York City. For writing, tracing and printing paper, drawing paper and drawing tablets and draftsmen's paper.

TRIUMPH—No. 253,540. The B. Lawrence Stationery Company, New York City. For eyelets for fastening papers together.

FIBREX—No. 266,189. The Chillicothe Company, Cleveland, Ohio. For photographic mounts of paper and cardboard.

PACKER—No. 271,163. Better Packages, Inc., New York City. For tape-serving machines for facilitating the wrapping of packages by supplying gummed tape and moistening the tape to be attached to the package.

THE STATLER—No. 279,478. M. A. King Company, Somerville, Mass. For toilet paper.

SIMCONDEX—No. 281,999. William N. Howard, Los Angeles, Cal. For filing systems, namely, paper files, index cards, charts, and books.

N within a diamond, with the expression "NOTHING COUNTS LIKE SERVICE"—No. 282,049. Newcomb Printing Company, Inc., New York City. For paper and stationery.

I G A—No. 275,052. Independent Grocers Alliance Distributing Company, Chicago, Ill. For writing paper, pen nibs, pens, and pencils.

PARA-SANI—No. 281,542. Appleford Paper Products Ltd., Hamilton, Ontario, Canada. For wrapping paper.

PROSPERITY—No. 283,953. Kalamazoo Vegetable Parchment Company, Kalamazoo, Mich. For waterproof wrapping paper.

D B M—No. 281,972. Stone & Andrew Company, Boston, Mass. For folding coated book paper.

POND'S—No. 283,053. Pond's Extract Company, New York City. For tissue paper for removing cold cream.

SUPREME—No. 283,668. Consolidated Ribbon and Carbon Company, Chicago, Ill. For typewriter ribbons and carbon paper.

PORTAPRINT—No. 282,680. Repeating Stamp and Duplicator Corporation, New York City. For stencil hand stamps and parts thereof.

AIR WAY—No. 277,507. Robert Gaylord, Inc., St. Louis, Mo. For fiber board shipping boxes.

TEXLIN—No. 276,739. Regal Paper Company, Pulaski, N. Y. For toilet paper.

MULTISTAMP—No. 279,951. The Multistamp Company, Norfolk, Va. For stencils, varnish for correcting stencils, etc.

NARONAP—No. 279,646. Daniels Manufacturing Company, Rhinelander, Wis. For paper towels and napkins.

REA RETA ROLLER FACIAL TISSUE—No. 282,056. Walter C. Ross, New York City. For paper facial tissues.

MARK OF QUALITY, THE PEERLESS PAPER MILLS, INC.—No. 283,135. The Peerless Paper Mills, Inc., Oaks, Pa. For toilet paper.

DUROTILE—No. 283,297. The Prager Company, Inc., Brooklyn, N. Y. For wall paper.

PERPETUAL BOND—No. 282,644. Goldsmith Brothers, New York City. For writing and typewriting paper.

ELECTRA—No. 281,949. The Gummed Products Company, Troy, Ohio. For gummed paper sheets, gummed paper tape, gummed cloth sheets and gummed cloth tape.

SERV-O-LUNCH—No. 280,550. Indiana Fibre Products Company, Marion, Ind. For paper dishes.

Boston Paper Market Steady

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., July 22, 1929.—Conditions in the Boston paper market continue about as they have been for the last several weeks. In fine paper "business is going along smoothly," to use an expression heard in the trade. Taken as a whole there is an average activity in paper used by the printers, although some of them have been ordering in smaller amounts. The situation in coarse paper is fairly favorable.

As had been expected, box board buying has increased, with prices firm, although the much hoped-for advance in values has not taken place yet. The trade is optimistic, however, that possibly with the advent of fall and winter orders an upward trend will be a realization. The constant plaint is that box board is selling at less than cost. The income of the dealers is also reduced.

In addition to greater activity expected from later seasonal orders, it is emphasized that the market has been cleared, or practically cleared, of cheap box board, a factor which, it is felt, should help the situation. Values are stiffening with chip board at $35 and news board at $37.50. Single manila lined chip is not selling lower than $47.50 with a maximum price of $50. It is said that there is no possible chance of a cut at the present time.

The market for waste paper, bagging and rags, both old and new, is steady but no stronger.

International Paper Co. Changes

[FROM OUR REGULAR CORRESPONDENT]

GLENS FALLS, N. Y., July 22, 1929.—A number of important changes have just been effected in the executive force at the plant of the International Paper Company in this city. W. Noyes Baker, who for several years has supervised activities in the mechanical testing department, has been promoted to the position as manager of the De Grasse mill of the firm at Pyrites on the Grasse River in St. Lawrence County. He has already assumed his new duties and the entire family will soon take up their residence at that place. Mr. Baker was graduated from Cornell University in 1915 with the degree of mechanical engineer. Since graduation he has been in the employ of the International Paper Company.

A farewell banquet was tendered this week by business associates to A. H. Davison, who has resigned as hydraulic engineer at the Sherman Island Mill of the company. During the event he was presented with a traveling bag as a token of esteem with the presentation speech being made by Major John H. Barker, an official of the firm. He will leave this city within a few days for Providence, where he has a position as an engineer with the war department.

Once More Condor Proves Its Aid To a Great Industry

UNDER the gruelling strain of the paper mill — challenging time—overcoming difficulties—defying the strength and endurance of anything human — Condor goes on — hour after hour, year after year, giving the same steady, dependable performance.

The Condor Belt in the picture is an 18' 6 ply belt on a chipper drive at the Northern Paper Mills, Green Bay, Wisconsin.

The reliability of the Condor Belt, evidenced in all its service records, is a matter of scientific construction — for Condor is not only built to the usual specifications, but its component parts are built for ageing — it is steeled against time.

May we help you work out your power transmission problem. Our engineers may be able to increase your power efficiency and cut down your belting costs. We will answer your inquiry at once, giving our recommendations. This service obligates you in no way whatsoever.

THE MANHATTAN RUBBER MFG. CO.
Executive Offices and Factories - PASSAIC, NEW JERSEY
Branches in the Principal Cities

News Print Production for June

Production of news print in Canada during June, 1929, amounted to 225,055 tons and shipments to 223,920 tons, according to the News Print Service Bureau. Production in the United States was 113,407 tons and shipments 114,558 tons, making a total United States and Canadian news print production of 338,462 tons and shipments of 338,478 tons. During June, 20,802 tons of news print were made in Newfoundland and 1,336 tons in Mexico, so that the total North American production for the month amounted to 360,600 tons.

The Canadian mills produced 152,751 tons more in the first six months of 1929 than in the first six months of 1928, which was an increase of 13 per cent. The United States output was 21,015 tons, or 3 per cent less than for the first six months of 1928. Production in Newfoundland was 11,263 tons, or 10 per cent more in the first six months of 1929 than in 1928 and in Mexico 1,727 tons more, making a total increase of 144,726 tons, or 7 per cent over the same period in 1928.

During June the Canadian mills operated at 86.7 per cent of rated capacity, United States mills at 80.8 per cent and New foundland mills at 105.6 per cent. Stock of news print paper at Canadian mills totalled 24,199 tons at the end of June and at United States mills 24,602 tons, making a combined total of 48,801 tons, which was equivalent to 3.1 days' average production.

Demand in Indianapolis Spotty

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., July 22, 1929.—A continued spotty condition prevails in the local paper market. Those printers who are busy seem to be very busy and their demand on local paper houses is good for fine papers, but there are some printers who are not so busy. Weather conditions, which for a week have been very bad in nearly all sections of the state have had something to do with the general situation.

The local paper houses continue to be faced with a price cutting battle waged from entirely outside the local trade area. It seems to be the desire of these foreign houses to get the business and forget the profits with the result that the local paper houses are being compelled to meet a vicious competition with the same weapon, price reductions. While sales volumes the first six months of the year have been equal or better than last, the trade has not made as much money because of this condition.

Building papers are in fair demand, though hurt right at the height of the season by continued bad weather. Wrapping papers are in fair demand with prices weak. News print demand has fallen off, particularly in the rural communities, but with the wheat being harvested, there should be a better demand in the rural sections as the merchants begin to make a bid for the harvest money.

Paper-Mulch Trials Suggested

Tests of paper mulch to enhance growth of plants and minimize competition with weeds have indicated need for more extensive trials of the system under a wide variety of conditions and with many crops.

In circular 77-C, Suggestions for Paper-Mulch Trials, just published by the United States Department of Agriculture, L. H. Flint of the Bureau of Plant Industry, explains the general differences in the two kinds of paper used and the methods of applying it in horticulture. The department began small trials of mulch paper in 1924. From the horticultural viewpoint some of the results were very striking. Less is known as to the economic value of the practice. The department does not recommend extensive commercial-scale use of the paper. It does recommend experimental trials and careful comparisons of small areas of many kinds of plants grown under paper mulch with similar areas under ordinary methods of culture. This circular suggests trials which would be of advantage to gardeners and truck growers. Expense should be limited until trials have demonstrated economic practicability of the method.

Circular 77-C is available free to those applying to the United States Department of Agriculture, Washington, D. C.

New Agitating Methods

A very timely and unusual discussion of the subject of Propeller Agitation was presented by Arthur L. Whiteside, M.E., of the Mill-Clutch Machine and Foundry Company, Cleveland, at the tenth annual convention of the American Pulp and Paper Mill Superintendents' Association.

Mr. Whiteside's paper stated that an intelligent and persistent effort is being made to bring agitator design and effectiveness up to the standards and high efficiency of the drives which operate them to put them on a par with modern industrial machinery.

A new agitating principle was described which has been perfected to a state of practical success. This new principle is the tubular agitator which utilizes a propeller mounted in a slotted tube within the tank for creating the mixing currents. The propeller blades are adjustable. This method of agitating assures complete intermixing in a very short time and with a substantial saving of power over other methods. This Tubular Agitator has an application in every industry where mixing or agitation of liquids and semi-solids is required.

Copies of the paper are available by addressing the Hill-Clutch Machine and Foundry Company, Cleveland, Ohio.

Du Pont Cellophane Co. Changes

O. F. Benz, director of sales of the Du Pont Cellophane Company, accompanied by Mrs. Benz, sailed for Europe, July 12 They will make a trip through England, France and Germany returning in about six weeks.

L. R. Mills, recently joined the sales force of the company and will travel through Michigan and Wisconsin, making his headquarters in the Chicago office at 111 W. Washington street.

C. B. Estabrook, formerly a Cellophane representative in outlying territory around Chicago, has been transferred to Chicago proper with headquarters at 111 W. Washington street, where he is taking over the territory previously covered by C. W. Bollinger, who is now in the New York general sales office.

C. W. Robinson, formerly of the order department of the New York office, has been appointed office manager of the Chicago district office, in charge of all inside work.

H. E. Walthor, salesman for the Cellulose Caps Division, has received new territory comprising Brooklyn, New Jersey, New England, Western New York, Eastern Ohio and Pennsylvania, and Baltimore and vicinity.

Argentine Casein Exports Higher

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 22, 1929.—Argentine exports of casein during the first quarter of 1929 amounted to 6,168 metric tons as compared with 5,004 metric tons during the corresponding period of 1928, and 5,628 tons during the first quarter of 1927, Assistant Trade Commissioner Charles F. Stephenson, Buenos Aires, reports to the Department of Commerce.

Shipments of casein to the United States during the first quarter of the present year were 536 tons greater than during the similar period of 1928, although shipments of cheese and butter to the United States during the present year were smaller than those of the first quarter of last year.

Paper Index Number for June

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 24, 1929.—June wholesale price index number for paper and pulp was 88.2 compared with 88.3 for May and 89.2 for June of last year, taking 1926 at 100, according to the Bureau of Labor Statistics, Department of Labor.

Modern Advertising

Advertising in the field of paper and paper making machinery is an advertising problem. Arthur Brisbane says, "The man who knows enough to fit his advertising to the changing moods of the times, is a man of genuine ability."

In a general way, the methods of paper making have not changed, and until a few years ago when one of the machinery builders (it was the Dilts Machine Works, Inc.) began calling attention to the importance of real talent and good equipment in the beater room, and put upon the market their New Type Beating Engine, the character of most advertisements placed before the paper trade was decidedly "drab." Today the trade columns flaunt red ink, attractive pictures catch the eye, and the world knows that "Your paper is made in your Beaters."

But it is not the cleverly worded advertisements, nor the gaudy red ink atrocities, nor yet the attractive pictures so artistically displayed, that count in the long run. It is merit in the article itself that produces the real results.

For example, note the popularity of the Dilts New Type Beating Engines and the nation wide spread of their users. Successful advertising today is, after all, only "Truth in a new dress."

VICE-PRESIDENT

DILTS MACHINE WORKS, INC.
Fulton, New York

A Bundle of Rags

By C. H. Wood, E. Butterworth & Co., Inc.

Rags! that is the theme of my song,
What a theme for poetical muse.
The eyes of a lover, could scarcely discover
A charm, though from different views,
Tom Hood sang the "song of the shirt,"
Not exactly a topic divine,
But he sang in season, impelled by a reason
Quite lacking in this one of mine.

And yet, humor, pathos or pain,
In a bundle of rags might be found,
Could they speak of the places, the different races
Ere purchased at so much a pound.
This scrap of a handkerchief, worn
Till nothing is left but a thread,
Could tell of long years, of bitterest tears
And the hopes of a life, withered, dead.

This strip has borne sunshine and rain,
Has weathered full many a storm,
Once a vagabond's wrap, it has now come back
To serve in a different form.
Evolution is here seen indeed,
The sheet which oft travels afar,
After keeping from damp, the bones of a tramp
Blossoms forth in the "Times" or the "Star."

And here, is a portion of hose,
Once worn by demoiselle fair,
How little she dreams, that huge machines
Will make great changes there.
And did good Mrs. Grundy know,
She might utter a pious "alack!"
That a worldly stocking—it is rather shocking—
Should carry a hymn to a black.

And now in the motley heap,
At length it has reached the mart,
A rag doll worn, all tattered and torn
Once the joy of a little one's heart.
One phase of its purpose done
Running on, like a rippling brook,
It may form a page, for the wise and sage,
Or a child, in a story book.

Does "my lady" in snug boudoir,
When inditing on "best cream laid,"
Ever think for a minute, there may be within it
Some article worn by her maid.
Or a poet who's rhapsodes please
The ears of a listening world,
As he shapes his dream, that the "scribbling" ream
Some village maid's locks once curled.

They gather like Autumn leaves,
"Shots," "Cuttings," or "superfine,"
Those culled from the sinner, a little bit thinner
Than some from the more divine,
Unsorted, together they lie,
Soon each will a purpose fulfil,
The worst with the best, be put to the test
When at length they are borne to the mill.

It may be—from a bundle of rags,
Some tangible truths we may get,
No preamble "heady," but quite rough and ready
A laity sermonette.
That the rags of our lives may be
Be it thus—of some purpose still,
Whether "black" or "fine," that they yet may shine,
When passed through the chastening mill.

That thoughts we may deem as "waste"
May be made as refiners' gold,
That small things tend, to a larger end,
That dross may true worth enfold,
Whether high or low estate,
Of repute or of small renown,
If not the shade for the "best cream laid"
We may serve as a useful "brown."

Boston, Mass., July 22, 1929.

Orchard and Midland Paper Company Merge

Announcement has just been made of a merger between the Midland Paper Company and the Orchard Paper Company, both of St. Louis. The business in the future will be conducted under the name of the Orchard Paper Company with offices at 1113 South Twelfth boulevard, known as the Orchard Building. There will be no change in the officers of company, the following still retaining their various positions: Herman C. Orchard, president, Charles P. Orchard, vice-president, Louis Weenick, secretary, and Sidney Strauss, treasurer. Carl Stockstrom, formerly president of the Midland Paper Company, will become a member of the board of directors of the company.

The various paper products previously manufactured by both companies will be continued, and the office and sales personnel retained. Those products manufactured by the Orchard Paper Company will be produced at the present factory at 1112 South Frey avenue, while Midland's plant at 524 South First street will be used for the production of those articles previously manufactured by that company.

This is the second consolidation in which the Orchard Paper Company has figured. Last year the business of the Union Cordage & Paper Company, which manufactured "Thank You" Wrapping Paper was absorbed, and Joseph P. Collins, president of that Company, joined the organization. This new consolidation makes the Orchard Paper Company one of the largest converters of paper specialties in the country. Amongst the lines now manufactured are: trunk lining, box covering, holiday wrappings, decorated wrappings, notion, glassine and millinery bags, shopping bags, and made-to-order bags. Most of these items are marketed through regular paper distributors.

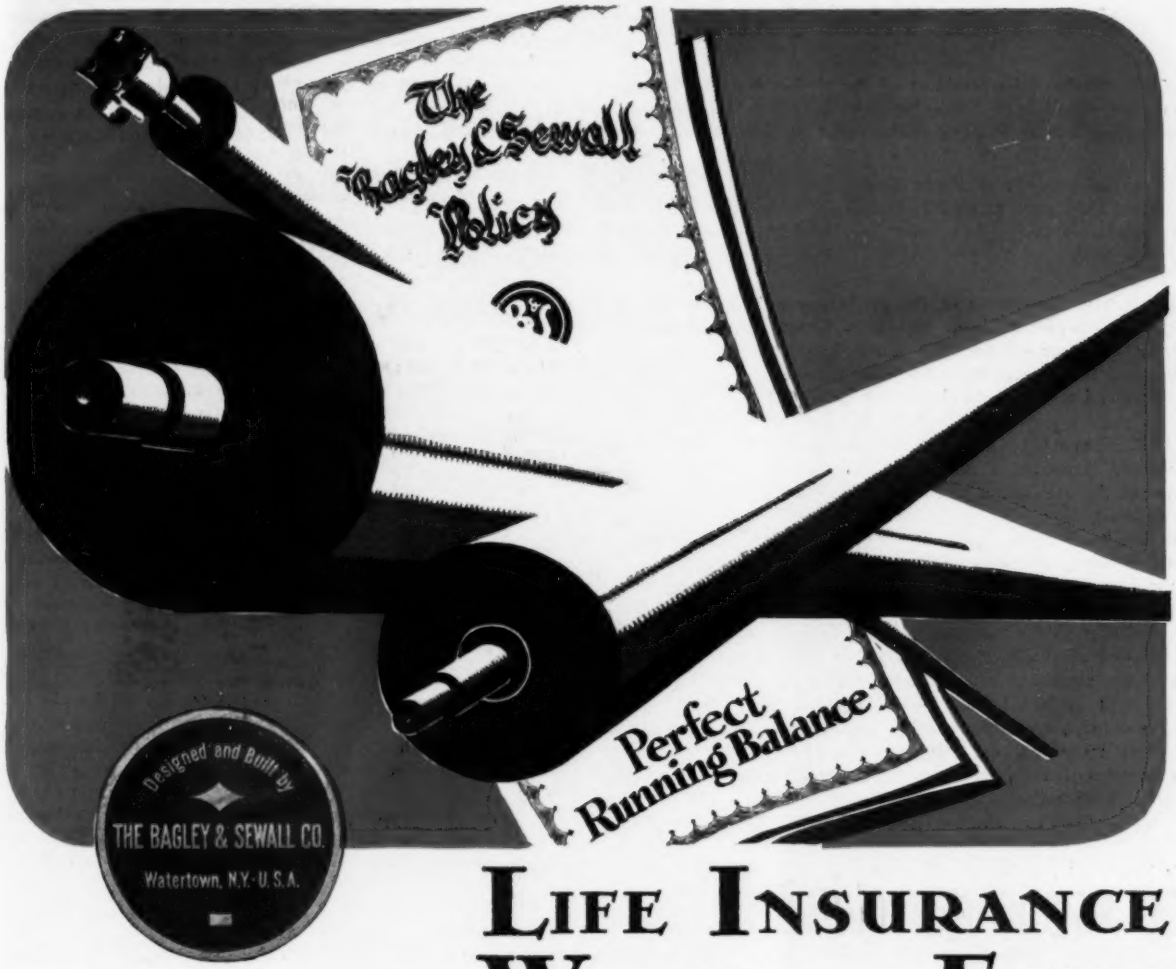
The company will have a paid up capital of $200,000 in common stock and $50,000 preferred, and will occupy a total of approximately 100,000 square feet of floor space.

To Transfer Title To Colorado Paper Mills

[FROM OUR REGULAR CORRESPONDENT]

Denver, Col., July 12, 1929.—Receiver George W. Beck for the Colorado Pulp and Paper Company has been instructed by Judge Samuel W. Johnson of the Adams county district court that he will transfer the title to the property of the paper company, on or about August 1, to I. Rude and Max Bronstine who bid $228,000 at the last auction sale.

The upset price was named by Judge Johnson at $300,000, but none of the bids made were as close to the figures as the bid named herein and unless an appeal is made to the state supreme court, there is nothing to prevent the transfer. Anyone wishing to contest must post a $25,000 bond. Almost from the day this mill was completed up to the present time there has been turmoil, the opening wedge being excessive extra costs above the estimated price, and after going into its first receivership and being bought by Charles B. Meyers and Joseph Buchhalter, disagreements and court actions came thick and fast, then again into receivership. The plant is a bright airy one, constructed of concrete and steel, is located just outside of Denver county right on the railroad and as there are no mills making the cardboard and other paper products anywhere near, experts say that it should pay and pay well if properly conducted.



LIFE INSURANCE for WIRES and FELTS

Roll cost cannot be figured by the price on the invoice—wear and tear on wires, felts and bearings must enter into the figure. Bagley & Sewall makes rolls with this thought in mind...of brass, bronze, steel, aluminum—brass cased, rubber covered or mirror finished ...and every one *perfectly balanced!* Not merely static balance but an exact *running balance* that eliminates the toll of vibration and whipping—*specialized rolls* at a cost no higher than ordinary ones. And they save that cost again and again in performance and lowered operating and maintenance charges.

Write us for full details

The Bagley & Sewall Co.

Watertown, N. Y.

New York Trade Jottings

D. S. Landau, vice-president of the Alling & Cory Company, paper merchants, New York, has been invited to address one of the meetings of the Printing Estimators Club this fall.

* * *

Gross sales of Scott Paper Company for six months ended June 30, 1929, were $3,974,762, comparing with $3,529,379 in first six months of 1928. June sales were $765,108, against $691,814 in June, 1928.

* * *

The annual convention of the Wall Paper Manufacturers' Association will be held at the Hotel Commodore, New York, during the week of July 29. More than 100 rooms have been taken for the exhibition to be held in connection with the conference, and an artistic and brilliant display is promised.

* * *

J. P. Hummel, president of the National Kraft Paper Manufacturers' Association, announces the opening of the executive office of the association at Suite 3511, Chanin Building, 122 East 42nd street, New York under the direction of Oliver M. Porter. The telephone number is Caledonia 5721. All members of the kraft paper industry, including both manufacturers and merchants, are assured of a hearty welcome at the association's headquarters.

* * *

Lily-Tulip Cup Corporation, New York, reports for quarter ended June 30, 1929, net profit of $263,445 after charges and federal taxes, equivalent after allowing for dividend requirements on 7 per cent preferred stock, to $1.41 a share earned on 183,000 shares of no-par common stock. This compares with $93,216 or 48 cents a share in the preceding quarter. Net profit for first six months of 1929, amounted to $356,661 after above charges, equal to $1.89 a share.

* * *

The Texas Gulf Sulphur Company, New York, reports for the quarter ended June 30 a net income of $3,571,270 after charges, equivalent to $1.40 a share on 2,540,000 no par capital shares. This compares with $3,880,260, or $1.53 a share, in the preceding quarter ,and $3,586,819, or $1.41 a share in the corresponding period of 1928. Net income for the six months ended June 30, was $7,451,530, or $2.93 a share, compared with $6,674,658, or $2.63 a share, in the similar period of 1928.

* * *

General Electric Company reports for six months ended June 30, 1929, net profit of $32,028,154 after depreciation, interest, reserves, federal taxes, etc. equivalent after dividends on special stock, to $4.26 a share on 7,211,481 shares of no-par common stock. This compares with $25,675,307 or $3.38 a share in first half of 1928. Net profit for quarter ended June 30, was $17,522,168 after above charges, equal to $2.34 a share on common comparing with $14,505,986 or $1.92 a share in preceding quarter and $13,769,820 or $1.82 a share in June quarter of previous year.

* * *

The reorganization of The Kalbfleisch Corporation of 200 Fifth Avenue New York, with American Cyanamid Company, through the consolidation of the assets of The Kalbfleisch Corporation with the assets of American Cyanamid Company, which was heretofore recommended by the Boards of Directors of each corporation, has now been ratified by the stockholders of the respective companies. It is planned to have the reorganization completed before the end of July and The Kalbfleisch Corporation will continue to operate as a separate organization and no change in management is contemplated.

* * *

Westinghouse Electric and Manufacturing Company reports for six months ended June 30, 1929, net profit of $13,131,881 after depreciation, interest and federal taxes, equivalent to $4.92 a share (par $50) earned on 2,666,315 shares of combined preferred and common stocks. This compares with $7,860,765, or $3.31 a share, on 2,370,063 combined shares in first half of 1928. Net profit for quarter ended June 30, amounted to $7,500,181 after above charges, equal to $2.81 a share on 2,666,315 combined shares against $5,631,700, or $2.11 a share, on 2,666,315 combined shares in preceding quarter and $3,902,411, or $1.64 a share on 2,370,063 combined shares in June quarter of previous year.

* * *

Mathieson Alkali Works, Inc., reports for quarter ended June 30, 1929, net income of $610,697 after depreciation, depletion, federal taxes, etc., equivalent after 7 per cent preferred dividend requirements to 96 cents a share on 588,328 no-par shares of common stock. The earnings for second quarter were largest in company's history. This compares with $506,675 or $3.15 a share on 147,082 common shares in preceding quarter and $556,666 or $3.49 a share on 147,207 shares in June quarter of 1928. Net income for first six months of 1929 totaled $1,117,371 after above charges, equal to $1.75 a share of 588,328 common shares against $986,130 or $6.11 a share on 147,207 shares in first half of previous year.

Paper Men's Parley Fails

THE HAGUE, July 19, 1929—So far as can be learned, the conference of pulp and paper producers of Europe and America has failed to produce any definite results. It became apparent that no satisfactory agreement would be reached when the European delegates held their own conferences in the Chamber of Commerce while the Canadian and United States representatives met in a hotel.

Afterward they combined in a general conference, but the Europeans were either unwilling or unable to supply statistics regarding new mills and machines, so that it was impossible to formulate any forecast of the approximate newsprint production during the next twelve months.

Yesterday the Canadian and United States delegates cabled back to Quebec and New York, respectively, but whatever the outcome of the communications, the Germans returned home last night leaving the others to finish the conference today. The secretary of the principal Swedish paper company represented issued the following statement today:

"During the meeting this week, statistics regarding news print production and consumption were discussed, and agreement was entered upon regarding general trade rules, packing of news print, etc. The representatives visited Van Gelderson's paper mill at Velsen, the organiztaion of which they highly admired.

Howard H. Reynolds Resigns

Howard H. Reynolds, who has been connected with the Rising Paper Company, of Housatonic, Mass., since it first started in business as the B. D. Rising Paper Company, has resigned his position, same to take effect immediately. Starting in the order department, Mr. Reynolds advanced in various positions, until several years ago he became sales and advertising manager, which position he held at the time of resigning. He served a two year term as president of the Salesmen's Association of the Paper Industry from 1921 to 1923. Mr. Reynolds has been keenly interested in the manufacture of paper and has delivered many talks as well as written numerous articels on the subject.

Lily-Tulip Cup Showing Good Earnings

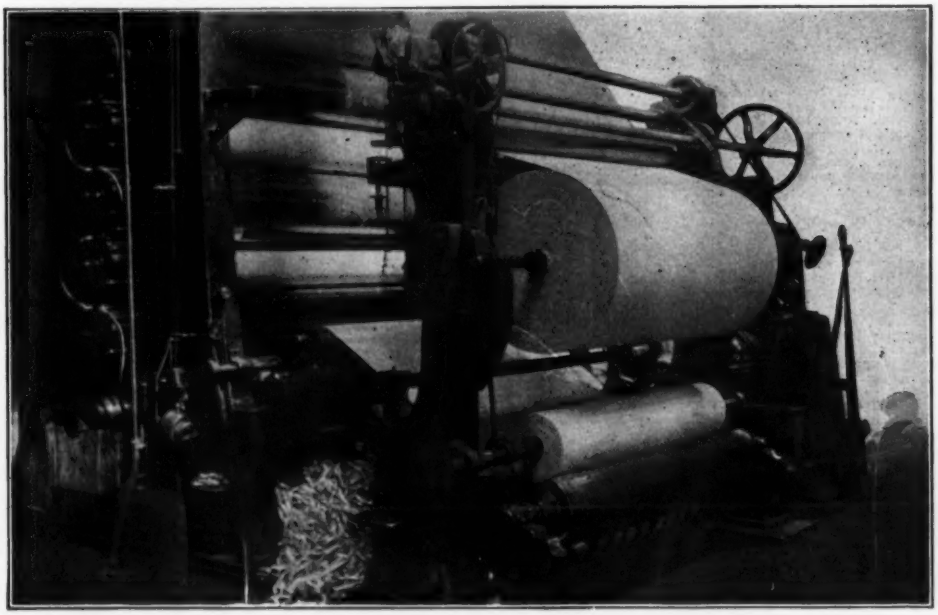
For three months ended June 30 Lily-Tulip Cup Corporation reports net earnings, after depreciation and all charges, including Federal income taxes, of $263,445, which is equivalent, after preferred stock dividend requirements, to $1.41 per share on the outstanding 183,000 shares of common stock.

For the six months ended June 30 net earnings, after all charges, including Federal income taxes, were $356,661. This is equivalent, after preferred stock dividend requirements for the period to $1.89 per share on the outstanding common stock.

"M & W" Drum Winders for Super-Calenders

PERMITS FASTER SPEED FOR CALENDERING

Shipping Rolls are made direct from Supers without rewinding the Rolls



Two-Drum Type Winder (Photograph taken in one of the mills of the Kimberly-Clark Co.)

Built with Two or Four-Drums
Makes use of wide stacks desirable

Rolls trimmed direct from Super-Calenders —(retrimming unnecessary).

Rolls readily changed from winding drums to unwinding shaft by means of self-contained electric motor lift.

Straight, hard rolls are made without wrinkles . . . no soft rolls or telescoped ends.

Winders equipped with automatic tension regulation to eliminate paper breaking between calender and winder . . . and to regulate the hardness of rolls to be wound.

For wide stacks of Calenders, the "M & W" Four-Drum Super-Calender Winder reduces the waste of finished product to a minimum.

All features of the well-known "M & W" Four-Drum Winder used for making shipping rolls direct on paper machine are retained—such as independent winding of rolls on independent shafts, etc.

"M & W" Four-Drum Super-Calender Winders equipped with Removable Top and Bottom Slitters. "M & W" Brass Collapsible Winding Shafts are the latest improvement for High Grade Mills.

Further Particulars Upon Request

THE MOORE & WHITE CO.
PHILADELPHIA, PA.
N. PHILA. STA. PENNA. R.R.
PAPER MILL MACHINERY

Patents Pending for Recent Improvements to "M & W" Drum Winders

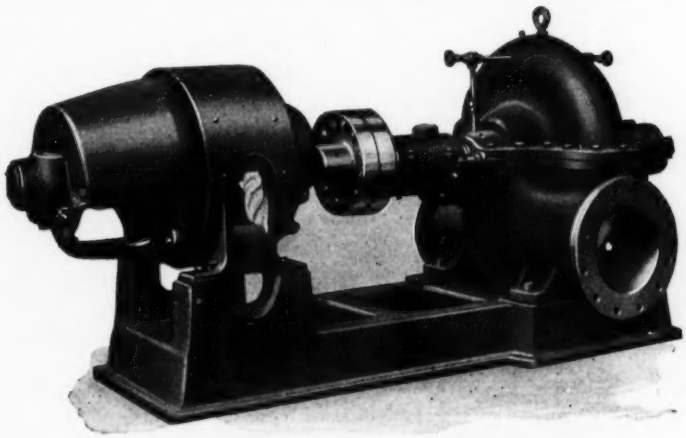
PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

For the Month Ending May 31, and for the Five Months Ending May 31, 1929 as Compared with Corresponding Months of Previous Year

IMPORTS—PAPER

	May				Five Months Ending May 31			
	1928		1929		1928		1929	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Paper and Manufactures (total)	.....	$13,308,182	.....	$13,909,592	.....	$63,909,053	.....	$63,824,953
Printing paper—								
Standard newsprint ..... lbs...free	367,780,431	11,962,359	412,071,218	12,274,371	740,736,072	56,877,445	1,858,635,577	56,381,909
Imported from—								
Finland ..... lbs.	6,326,595	156,671	6,621,705	152,498	30,835,125	822,083	21,530,772	521,111
Germany ..... lbs.	1,992,610	54,494	1,534,822	37,162	7,249,413	196,134	6,566,184	165,593
Norway ..... lbs.	2,086,532	56,042	56,244	1,551	7,796,617	202,145	4,520,141	112,919
Sweden ..... lbs.	8,113,254	217,961	6,344,050	158,319	43,341,500	1,168,955	38,196,065	978,005
Canada ..... lbs.	333,930,265	11,000,793	373,266,480	11,234,553	1,608,680,181	53,123,004	1,723,691,248	52,802,436
Newfoundland and Labrador ..... lbs.	15,324,756	476,188	24,247,917	690,288	42,187,304	1,346,385	64,131,167	1,801,845
Other countries ..... lbs.	6,419	210	.....	.....	645,932	18,739	.....	.....
All other n.e.s ..... lbs...dut.	468,638	24,919	426,303	15,972	3,376,077	156,458	1,736,788	79,832
Grease-proof and water-proof papers...lbs...dut.	55,945	15,148	127,970	28,849	431,410	90,188	586,117	120,446
Kraft wrapping paper ..... lbs...dut.	619,647	27,068	652,827	27,627	2,623,274	111,451	3,727,534	159,861
Other wrapping paper ..... lbs...dut.	1,682,654	30,839	798,548	23,494	7,692,880	156,499	3,089,074	92,307
Writing, letter, drawing, etc., papers..lbs...dut.	329,870	77,289	273,419	64,383	1,180,660	291,121	1,266,103	318,218
Surface-coated paper ..... lbs...dut.	192,460	87,650	306,014	112,890	952,249	443,087	1,139,872	479,111
Tissue, copying, etc., papers..... lbs...dut.	250,880	146,381	418,811	233,635	1,313,876	827,952	1,812,428	971,385
Paper boards, n. e. s.—								
Pulp boards in rolls ..... lbs...dut.	5,104,100	114,973	5,611,025	122,647	24,116,370	539,420	26,068,017	580,851
Paper boards, pulp board, and card-board ..... lbs...dut.	1,259,279	30,158	2,638,004	56,960	10,189,149	226,135	9,628,421	223,022
Leather board, test, and wall board..lbs...dut.	2,660	235	196,539	7,135	466,813	12,527	758,299	28,688
Cigarette paper, cigarette books, and Covers ..... lbs...dut.	816,604	223,018	1,110,834	340,778	5,029,466	1,379,677	5,061,361	1,653,635
Hanging paper (wall paper)..... lbs...dut.	177,870	60,256	214,409	55,015	1,173,251	324,628	1,234,777	340,846
Duplex decalcomania paper, not printed..lbs...free	72,808	16,894	54,585	19,311	256,129	59,926	286,473	74,052
Paper boxes ..... dut.	.....	147,811	.....	163,302	.....	716,232	.....	646,029
Pulp or papier-mache and manufactures, n. e. s. ..... dut.	.....	33,253	.....	28,597	.....	209,120	.....	249,876
All other paper and manufactures..... dut.	.....	309,931	.....	334,626	.....	1,487,187	.....	1,424,885
WOOD PULP								
Mechanically ground wood pulp.....tons..free	21,450	530,942	18,789	438,500	93,079	2,299,185	90,087	2,286,761
Sulphite wood pulp.....tons..free	65,322	3,813,995	81,997	4,896,887	360,619	21,119,067	400,260	23,495,272
Unbleached ..... tons..free	41,282	2,015,062	50,116	2,529,739	241,058	12,095,676	262,038	13,087,551
Bleached ..... tons..free	24,040	1,798,933	31,881	2,367,148	119,561	9,023,391	138,222	10,407,721
Imported from—								
Finland ..... tons	7,393	302,287	8,411	409,887	39,782	1,622,982	46,336	2,160,480
Germany ..... tons	4,908	319,016	8,690	623,865	22,489	1,485,711	27,321	1,893,509
Norway ..... tons	4,956	323,084	4,916	301,131	28,746	1,913,797	23,866	1,583,701
Sweden ..... tons	10,317	556,364	20,615	1,180,538	101,317	5,488,966	141,109	7,859,816
Canada ..... tons	33,869	2,114,604	35,538	2,185,605	150,951	9,646,931	150,958	9,427,184
Other countries ..... tons	3,879	198,640	3,827	195,861	17,334	960,680	10,670	570,582
Sulphate wood pulp, unbleached (kraft pulp) ..... tons..free	15,234	886,419	23,508	1,301,737	119,164	6,714,010	125,160	6,966,929
Imported from—								
Finland ..... tons	394	20,289	1,464	72,071	12,934	546,062	10,882	513,213
Norway ..... tons	1,772	71,901	2,698	125,424	5,452	279,134	5,706	317,573
Sweden ..... tons	1,259	65,085	9,036	460,920	42,343	2,198,436	58,673	3,049,726
Canada ..... tons	11,218	701,917	9,407	596,043	56,907	3,619,586	46,466	2,922,191
Other countries ..... tons	591	27,227	903	47,279	1,528	70,792	3,433	164,226
Sulphate wood pulp, bleached.....tons..free	458	24,341	911	63,268	4,389	258,048	6,094	437,584
Other pulp ..... tons..free	151	18,389	2,503	91,890	1,866	143,308	4,474	236,649
CRUDE PAPER STOCK								
Rags for paper stock..... lbs...free	37,609,289	695,620	43,643,859	935,310	171,584,838	3,207,212	170,666,008	3,405,395
Waste bagging, waste paper, etc..... lbs...free	13,577,189	191,846	12,485,535	144,892	59,258,155	870,043	57,448,548	699,714
Old rope and all other paper stock.... lbs...free	5,305,039	198,075	12,725,894	404,137	22,923,024	709,003	40,101,156	1,319,563
CHEMICALS AND OTHER PAPER MAKERS' MATERIALS								
Colors, dyes, stains, color acids, and color bases, n. e. s..... lbs...dut.	438,040	504,494	798,800	892,317	2,617,700	2,860,396	3,664,072	4,217,160
Imported from—								
Belgium ..... lbs.	11,989	11,123	7,777	12,169	59,146	63,721	25,676	32,654
France ..... lbs.	2,346	3,524	3,361	3,412	32,247	44,004	61,291	85,756
Germany ..... lbs.	323,067	359,133	519,853	569,240	1,708,498	1,734,374	2,630,049	2,965,354
Italy ..... lbs.	.....	.....	1,981	2,094	37,661	33,264	3,961	4,198
Switzerland ..... lbs.	84,127	109,909	241,931	275,757	642,863	820,246	870,287	1,044,015
United Kingdom ..... lbs.	6,777	5,607	14,642	17,278	48,135	46,428	41,412	46,825
Other countries ..... lbs.	9,734	15,198	9,255	12,367	89,150	118,359	31,396	34,358
Casein or lactarene ..... lbs...dut.	1,869,527	236,809	3,480,423	423,793	13,043,938	1,753,551	16,124,618	1,916,822
Kaolin, china, and paper clay.....tons...dut.	32,251	347,540	42,247	449,629	117,599	1,224,039	113,106	1,231,525

(Continued on page 46)



When is a pump *not a pump?*

When it is not designed to handle the particular job for which it is intended!

Nearly every pump in a paper or pulp mill has a task all of its own to perform.

Varying head capacities—varying rates of flow—and varying consistencies of stock, water, acids, etc.—all call for special variations in design and construction which only a background of intimate paper mill experience can accurately determine.

There is no guesswork in any Valley Pump installation. We know, from the data we have gathered during our 25 years of Paper and Pulp Mill pump building experience, exactly what requirements are necessary to do a certain pumping operation, and firmly stand back of every installation we make.

Our booklet on Centrifugal Pumps will give you full details regarding VALLEY pumps and what can be expected of them. Write for it.

VALLEY

Equipment for Paper and Pulp Mills

New York Office: 350 Madison Avenue
Western Manufacturing & Sales Division: Smith & Valley Iron Works Co.
Portland, Oregon

PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

(Continued from page 44)

EXPORTS—PAPER

	May 1928 Quantity	May 1928 Value	May 1929 Quantity	May 1929 Value	Five Months Ending May 31 1928 Quantity	Five Months Ending May 31 1928 Value	Five Months Ending May 31 1929 Quantity	Five Months Ending May 31 1929 Value
Paper and Manufactures (total)	.....	$2,500,298	.....	$2,831,715	.....	$12,449,019	.....	$15,961,991
Printing paper—								
Newsprint paper ....lbs.	1,760,811	70,571	2,394,816	84,986	8,741,792	340,780	14,291,492	520,234
Exported to—								
Canada ....lbs.	11,020	496	248,415	10,039	81,907	3,785	415,386	18,903
Central America ....lbs.	84,652	3,055	100,155	3,570	386,642	14,006	460,933	16,608
Cuba ....lbs.	502,385	17,268	323,200	11,030	1,978,552	73,023	1,368,168	48,862
South America ....lbs.	674,435	26,315	321,414	10,910	2,063,171	78,774	3,924,328	142,160
China, Hong Kong, and Kwantung..lbs.	40,330	1,613	545,642	18,263	215,703	8,548	2,966,692	99,697
Philippine Islands ....lbs.	382,534	19,099	693,818	23,736	3,547,327	144,876	4,364,646	155,744
Other countries ....lbs.	65,455	2,725	162,172	7,438	468,490	17,768	791,339	38,260
Book paper, not coated ....lbs.	2,541,991	166,151	3,254,371	210,607	9,192,288	699,919	16,665,707	1,160,405
Exported to—								
Europe ....lbs.	21,587	3,477	72,670	5,413	184,787	18,648	918,904	76,158
Canada ....lbs.	1,390,039	75,879	1,533,141	89,446	3,207,618	198,258	5,721,133	345,989
Mexico ....lbs.	16,501	1,802	30,298	3,685	204,762	25,602	204,039	22,891
Cuba ....lbs.	460,077	33,381	436,639	30,249	1,954,350	147,582	2,048,558	142,530
Argentina ....lbs.	80,639	6,046	255,609	16,644	269,198	25,470	1,340,200	105,005
Other South America ....lbs.	31,728	3,334	67,196	5,758	458,777	38,178	538,399	46,580
China, Hong Kong, and Kwantung..lbs.	94,332	8,972	336,044	20,218	964,646	80,013	2,758,307	166,117
Philippine Islands ....lbs.	235,869	15,660	344,879	22,079	826,001	59,157	1,962,857	129,386
Australia ....lbs.	78,665	7,420	64,030	7,036	356,690	43,230	518,534	70,047
Other countries ....lbs.	132,554	10,180	113,865	10,079	765,459	63,781	654,776	55,702
Cover paper ....lbs.	227,388	34,007	173,277	27,250	901,386	149,557	849,975	146,672
Grease-proof and waterproof paper....lbs.	189,360	31,123	200,072	51,525	1,175,215	182,687	1,189,549	219,737
Overissue newspapers ....lbs.	.....	.....	10,566,062	128,235	.....	.....	54,626,086	628,346
Wrapping paper ....lbs.	2,812,261	178,272	3,921,029	244,647	15,182,388	1,093,438	18,286,531	1,252,488
Surface-coated paper ....lbs.	1,211,508	117,442	1,062,830	98,117	3,633,048	403,286	8,374,317	749,223
Tissue and crepe paper ....lbs.	445,002	100,107	332,855	72,523	2,357,699	482,066	1,819,338	395,785
Toilet paper ....lbs.	477,078	58,801	422,332	47,027	2,286,509	259,899	3,091,622	350,825
Paper towels and napkins....lbs.	198,351	25,298	195,420	27,884	1,092,193	141,538	1,396,959	164,286
Box board ....lbs.	4,100,214	115,804	4,237,028	109,664	21,194,710	617,225	21,676,374	574,662
Bristols and bristol board....lbs.	205,442	24,939	309,039	24,627	854,277	89,531	1,346,560	129,773
Other paper board and straw board....lbs.	3,398,702	168,579	3,267,377	163,796	15,905,592	796,660	17,227,903	817,974
Sheathing and building paper....lbs.	1,015,896	38,149	2,332,028	67,232	5,128,837	194,486	10,650,093	356,787
Fiber insulating lath or board....sq. ft.	.....	.....	1,777,655	53,834	.....	.....	8,624,976	284,332
Wall board of paper or pulp....sq. ft.	5,672,411	191,150	4,941,375	155,215	21,338,468	700,632	27,166,224	886,528
Blotting paper ....lbs.	400,140	42,008	353,443	41,863	1,758,416	204,329	1,660,998	192,488
Filing folders, index cards, and other office forms ....lbs.	139,232	41,292	143,603	54,517	644,934	219,873	710,544	258,230
Papeteries (fancy writing paper)....lbs.	46,283	13,369	39,345	12,636	302,090	66,586	262,457	67,053
Other writing paper ....lbs.	2,267,537	243,478	2,178,379	221,857	9,738,069	1,168,320	12,986,033	1,358,344
Paper hangings (wall paper)....yds.	1,633,257	35,832	1,701,131	39,656	19,273,701	361,017	17,693,367	372,590
Paper bags ....lbs.	750,907	77,674	846,996	77,340	3,478,154	327,318	4,594,943	415,976
Boxes and cartons ....lbs.	2,359,617	148,778	2,530,637	157,777	10,647,254	715,360	12,923,211	810,718
Envelopes ....lbs.	270,847	43,145	245,103	41,133	1,074,824	179,279	1,027,587	176,600
Vulcanized fiber sheets, strips, rods, and tubes..lbs.	508,973	132,044	490,290	113,579	2,117,114	581,399	2,808,670	702,475
Manufactures of vulcanized and indurated fiber..lbs.	62,566	14,953	33,542	12,972	248,632	76,624	140,004	50,510
Cash-register and adding-machine paper....lbs.	156,287	19,032	488,880	48,927	872,486	99,474	2,032,440	199,284
Other paper and paper products	.....	368,300	.....	442,289	.....	2,297,736	.....	2,719,666

WOOD PULP AND PAPER STOCK

Sulphite wood pulp ....tons	1,871	96,156	5,154	218,394	8,235	468,393	20,166	1,035,496
Soda wood pulp ....tons	295	26,929	358	28,242	1,048	83,901	852	68,360
Other wood pulp ....tons	223	15,954	555	38,119	1,059	63,300	2,928	194,526
Rags and other paper stock....lbs.	23,619,684	536,441	9,243,663	134,454	100,205,394	2,033,947	53,457,353	1,005,517

PAPER AND PULP MILL MACHINERY

Paper and pulp mill machinery....lbs.	.....	253,268	.....	288,170	.....	1,504,912	.....	1,237,252

Zeloid Products Corp. Makes Good Progress

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., July 23, 1929.—Henry H. Peck, secretary of the Zeloid Products Corporation, said the past week that he had been pleasantly surprised by the way the business men of Holyoke have welcomed the new concern and how quickly they have recognized the probable future effect upon the prosperity of the city. Holyokers have become financially interested and the Holyoke Chamber of Commerce has stood wholeheartedly behind the organization.

The new transparent wrapping paper for which there is assured a big field, is an improvement over other kinds in the market, the promoters state, in that it is tougher and less liable to crack and break. The great increase in the use of transparent wrappers for candy, nut packages, and scores of other uses forecast a ready sale for the product of the company. It is hoped to get the machinery running soon on a 1,000 pound a day output and increase this up to full capacity of the plant and machinery.

Compensation Awards for Injuries

[FROM OUR REGULAR CORRESPONDENT]

FORT EDWARD, N. Y., July 22, 1929.—A number of awards were given workmen in the paper industry at a hearing during the week before Referee Robert J. Cooper, of the State Labor Department, in Compensation Court. The largest award of the session was granted Edward Lewis, who received $1,191.33 to cover twenty per cent loss of his left arm sustained through an injury received at the local plant of the International Paper Company. An award of $438 to be paid weekly was granted Raymond Fisher to cover injuries received at the plant of the International Paper Company. The award covers loss of time through the injuries which resulted in fifty per cent loss of use of his middle finger and fifteen per cent loss of use of the index finger of the left hand. Ulbain Lorrenger, of Newcomb, was granted $375.52 for the loss of use of the right hand sustained from injuries while employed by Finch, Pruyn & Co., and Fred Holleran was awarded $131.10 for injuries received while in the employ of the same firm.

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has any good excuse for requiring excessive quantity of steam per pound of paper dried

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PAPER TRADE JOURNAL

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TARIFF BILL DELAYS

The new tariff bill, judging from recent developments, will not be passed soon. Much talk is likely to be indulged in and many bargains apparently will have to be effected before the bill is finally passed by the Senate.

Open tariff hearings which began on June 10 before the Senate Finance Committee were completed the latter part of last week after five weeks, almost double the time the committee said the hearings would last. The Senate went into the hearings on almost as complete a scale as did the House Committee on Ways and Means.

The eleven Republican members of the Finance Committee on Monday of this week began the rewriting of the House bill in executive session. While many predictions are being made and while majority leader, Senator Watson, of Indiana, has said that the bill will be ready when the Senate reconvenes on August 19, those who are facing the facts are of the opinion that it will be at least September 1 before the bill can be given to the Senate.

It has been mistakenly reported in the daily press that the members of the subcommittees of the Finance Committee would work out their own schedules and report to the full Republican membership, but this has been officially denied and the plan being put into operation is that all of the Republican members of the Finance committee are "sitting in" on all of the tariff schedules.

During the past week, Senator Reed of Pennsylvania, a member of the committee, has asked the Tariff Commission to translate the ad valorem rates as contained in the House bill into the so-called "American valuation" plan. Some of the United States values cannot be translated and in any event the work will take about three weeks. It is not believed that the Senate will change from the ad valorem rates as provided in the House bill.

Senator Smoot of Utah, chairman of the Finance Committee, has stated that after the majority members have completed their work that the results will be submitted to the full committee, including the Democratic members and all will have a full opportunity to discuss the bill before it is reported to the Senate. In the House the members of the minority party knew nothing of the bill until they saw it in print.

Senator George of Georgia, one of the Democratic members of the committee, before leaving Washington for his home last week declared that the Republican majority will scale down many of the rates as contained in the bill as it passed the House. This opinion is very generally believed in Washington, but it applies, it is thought, to those commodities which most directly affect the consumers of the country, such as sugar, shingles, cement and similar commodities.

There was an official denial from the White House the latter part of last week that President Hoover had asked the Tariff Commission to send him the names of the Democratic Senators and Representatives who have asked for tariff changes in the past few years. The story, printed last week, caused considerable stir among the Democratic members of Congress on the ground that the President was trying to "brow beat" the minority members into line.

Senator Simmons, of North Carolina, senior minority member of the Finance Committee, held a meeting on Friday of last week of the Democratic members who are lining up their forces to fight the bill when it reaches the floor.

Many experienced judges in such matters in Washington are said to be of the opinion that the bill cannot become law until the next regular session of Congress in December.

FOREIGN PAPER TRADE

Exports of paper and paper products from the United States during May were valued at $2,831,715, while those for the five months period ended May 31 reached a total value of $15,961,991 according to the Paper Division of the Department of Commerce. The month's total fell under that for the month of April by 4 per cent but at the same time exceeded the May, 1928, total by 13 per cent. Exports during the first five months of the current year passed those of the corresponding period of 1928 by 28 per cent.

Among leading items on the export schedule, increases were registered principally in newsprint, book, and wrapping papers, all three of which were greater than those of May of last year by 30 to 40 per cent. Writing paper exports, on the other hand, increased by only 4 per cent, while shipments of box boards and other paper boards and straw boards were inclined to show a decrease as compared with last year. Building paper and wall board exports greatly increased, sheathing papers showing a gain of 130 per cent, while insulating and wall boards increased by 20 per cent. Exports of paper bags, boxes and surface-coated papers were also substantially above those of the corresponding month last year. Among the minor items in this group, tissue paper exports declined by 25 per cent, toilet paper and blotting paper by 12 per cent, and papeteries and envelopes by 15 per cent and 10 per cent, respectively.

Imports of paper and paper products into the United States during May were 14 per cent above those of the preceding month and 4 per cent above those entered during May, 1928.

Imports of newsprint, which represent the bulk of the incoming paper shipments, amounted to 183,960 tons (long ton of 2,240 pounds), an increase of 24,964 tons over those of the preceding month, and 19,772 tons over May, 1928, while increased receipts for the five months period totaled 829,748 tons as against 777,114 tons for the corresponding five months in 1928.

Imports of other classes of paper and paper products, which were valued at $1,635,221 during May, registered an increase of 11 per cent over April and 21 per cent over the correspond-

ing month last year. Receipts of these products for the first five months of the current year were valued at $7,443,044 while newsprint imports amounted to $56,381,909, bringing the total for the period up to $63,824,953, as against $63,909,053 in 1928. Compared with a year ago, newsprint receipts show a decrease of 1 per cent in value while imports of other classes of paper and board increased by 6 per cent.

Imports of paper base stocks into the United States during May reached a total value of $8,976,316, a rise of only 2 per cent compared with April but of 25 per cent compared with May, 1928. Increases were confided to chemical pulps, rags, and other waste stocks. receipts of pulpwood and ground wood having in each instance declined both in comparison with the preceding month and the corresponding month last year. Imports of unbleached sulphate were also approximately 25 per cent under those recorded for April, but at the same time exceeded the May, 1928, receipts by 55 per cent.

For the five months period, imports of chemical pulp, rags, and other waste stock registered an increase, while receipts of pulpwood and mechanical pulp declined. Imports for the five months period reached a total value of $43,420,478 as against $41,006,889 during the corresponding period in 1928 Of this year's receipts, $4,572,611 represented pulpwood, $2,286,761 groundwood, $30,899,785 chemical pulp, and $5,661,321 rags and other paper stock.

Negotiating Sale of Water Power Rights

[FROM OUR REGULAR CORRESPONDENT]

HUDSON FALLS, N. Y., July 22, 1929.—In connection with rumors that the Union Bag and Paper Corporation was negotiating for the sale of water power rights here, Thomas R. Remsen, general manager, now in conference with officials of the firm in New York City, declared that the transaction was under way but no conclusion had yet been reached. It is understood that the St. Regis Pulp and Paper Company is the concern which is negotiating for the purchase of the power site although no official confirmation of the report would be made at the Hudson Falls office. The water power site near the Union Bag and Paper Corporation's holdings in this village is one of the few remaining undevedoped sites on the Hudson River. Another rumor current is that the power site will be developed by the erection of a new dam. It is reported that the value of the water power rights and property connected with it and owned by the company is valued at approximately $6,000,000.

The annual outing of employees of the company will be held in Fort Edward on July 27 and arrangements are being made to accommodate a large crowd. A buffet luncheon will be served during the day and the committee on arrangements is working hard to make this an outstanding event of the year. The sporting events will include a baseball game between the press room and the bag machine department employees.

Swedish Paper Prices Unchanged

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 24, 1929.—A report from Consul General John B. Osborne, at Stockholm, states that no changes are to be noted on quotations on Swedish wood pulp, news print, and wrapping paper during the first half of June.

Swedish news print mills report an output of 20,122 metric tons during the month of May, bringing the total for the current year up to 97,782 tons.

Little change was to be observed in the Swedish paper market up to the middle of June, except for an increased demand for sulphite wrapping, especially from the British and continental buyers.

Paper and Pulp Production for May

The total paper production in May, according to identical mill reports to the American Paper and Pulp Association, was 605,209 tons as compared with 586,887 tons in April, and 573,441 tons in May, 1928. All grades, excepting newsprint and wrapping, registered increases in monthly production over last year. Bag paper showed an increase of 21 per cent over May, 1928 production while felts and building increased almost 19 per cent, uncoated book 8 per cent, writing 9 per cent, paperboard 8 per cent, tissue 3 per cent, and hanging 4 per cent. The following grades registered production decreases in May, 1929, as against May, 1928: news print 4 per cent, and wrapping 3 per cent.

Shipments of all grades, excepting wrapping, showed an increase over May, 1928. The total shipments of all grades increased 8 per cent above the total for May of last year.

Stocks on hand registered an increase as compared with April, in all but newsprint, bag, felts and building, and writing. As compared with May, 1928, all grades excepting paperboard and hanging showed substantial decreases. The total stock on hand for all grades increased about 2 per cent over April, 1929, and decreased about 7 per cent from that of May, 1928.

Identical pulp mill reports for May, 1929, showed that the total production of all grades of pulp was about 9 per cent greater than May, 1928. Mill consumption was about 6 per cent greater, and shipments to the outside market 23 per cent greater than during the corresponding month last year. May, 1929 production totaled 245,159 tons against 237,825 tons in April, and 227,220 tons in March.

All grades, excepting groundwood and bleached sulphite, showed decreases in inventory at the end of May as compared with the end of April, 1929. As compared with May, 1928, all grades, excepting bleached sulphite, registered decreases in inventory.

REPORT OF PAPER OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF MAY, 1929

Grade	Production tons	Shipments tons	Stocks on hand end of month tons
News print	123,504	124,840	25,778
Book, uncoated	89,214	87,314	38,543
Paper board	233,143	231,038	61,912
Wrapping	53,752	52,546	50,008
Bag	16,525	16,737	6,285
Writing	33,328	33,908	39,590
Tissue	13,108	12,878	9,944
Hanging	4,720	4,276	3,920
Felts and building	7,505	7,554	1,259
Other grades	30,410	28,583	16,898
Total—All grades	605,209	599,674	254,137

REPORT OF WOOD PULP OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF MAY, 1929

Grade	Production tons	Used during month tons	Shipped during month tons	Stocks on hand end of month tons
Ground wood	108,144	94,163	2,200	116,326
Sulphite news grade	40,101	37,047	3,428	7,341
Sulphite bleached	27,216	24,345	2,727	2,803
Sulphite easy bleaching	2,888	2,963	72	556
Sulphite Mitscherlich	7,240	6,128	1,176	802
Sulphate pulp	32,809	26,924	6,265	3,766
Soda pulp	26,733	17,386	9,610	3,988
Pulp—Other grades	28	.....	.....	48
Total—All grades	245,159	208,956	25,478	135,630

Paramount Paper Products Co. Seeks Site

[FROM OUR REGULAR CORRESPONDENT]

FRANKFORT, N. Y., July 22, 1929.—The Paramount Paper Products Company, of Springfield, is seeking a site in this locality for establishment of its plant, according to information given out this week by the Chamber of Commerce. The company has written to Attorney H. L. Wilbur relative to a suitable location, tax rates, and other matters concerning the starting of a branch factory here. A committee of the local organization has been appointed to meet a representative of the corporation and explain the advantageous sites available for manufacturing concerns here. It is understood that the firm will employ a large number of local residents if it decides to open a plant in this section.

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Benzoate of Soda
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Ethyl Vanillin
Benzaldehyde
Benzoic Acid
Coumarin
Vanillin

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AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

Conductivity and Hydrogen Ion Measurements

By W. N. Geer[1]

This paper is presented for the purpose of suggesting the use of electrometric equipment as a means of studying, and the possibility of controlling, various processes in the pulp and paper industry. The large number of papers which have been published on pH measurements indicate the interest and value of such measurements. Conductivity measurements do not appear to be as widely used, as do pH measurements although where applicable they afford a very convenient means of control. The material contained in this paper, although not complete, gives an indication of what may be accomplished along these lines.

Conductivity Measurements

It is probably generally understood that an electrolytic resistance or conductance measurement is a measure of the concentration of dissolved salts present in a solution. The word salts is here used in the broader sense, meaning acids and bases, as well as the common conception of salts. As the concentration of salt increases, the conductance increases, or the resistance decreases. In order to determine the applicability of such measurements to the sulphite cooking process and the subsequent washing of the pulp, as well as the washing of soda pulp, a few measurements were made on such processes during a regular plant operation. The data presented are not complete, since the author did not feel justified in asking the plant management to modify their process in order to obtain the additional data. It is hoped, however, that the material presented will interest those concerned sufficiently to carry the work to a more definite conclusion.

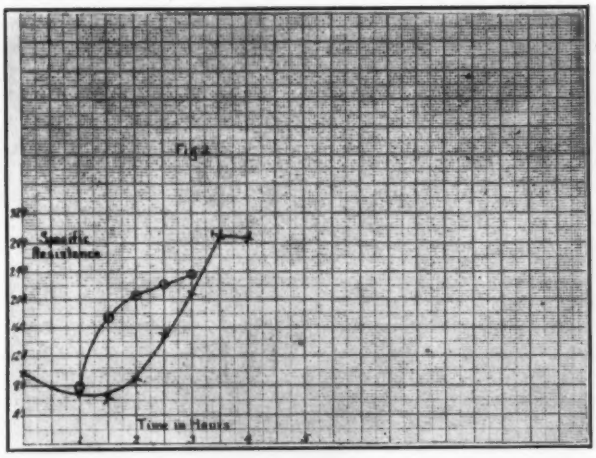

FIG. 2

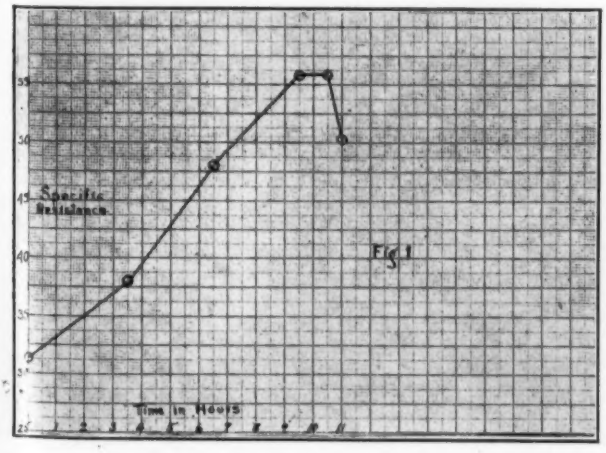

FIG. 1

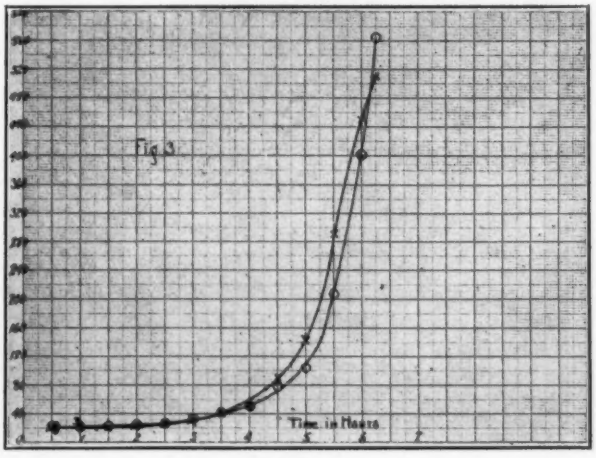

FIG. 3

* Presented at TAPPI Conference, Twelfth Exposition of Chemical Industries, New York, May 8, 1929.

[1] Leeds & Northrup Co.

Sulphite Cooking

In Fig. 1 are plotted the data obtained on measurements of a sulphite cooking liquor during the process of digesting. The specific resistances are plotted as the ordinate, and the time in hours as the abscissa. A smooth curve was not drawn through points plotted, since it could not be assumed that a uniform change took place.

It will be noted that the resistance increased more or less uniformly during the first 9½ hours of digesting. After the lapse of another hour it was found that the measured resistance was almost identical with that measured one hour earlier. If values had been obtained during this one hour period probably it would have been found that a fairly sharp maximum existed. A rather marked decrease resulted in the last one half hour of digesting.

The initial increase in resistance was due probably to the conversion of inorganic salts to organic. The final decrease in resistance might have been due to the formation of some compound such as acetic acid which is a better conductor than the complex organic substances. A better explanation could no doubt be offered by chemists much more familiar with this industry than is the writer.

The point of particular interest is that if similar curves generally are obtained in the sulphite digesting, conductivity measurements might well afford a means of following this process.

Washing of Sulphite Pulp

Before making any measurements on the washing of pulp, the writer assumed that a gradual increase in resistance would initially take place, with a more marked increase toward the end of the wash, and finally that the resistance would approach a constant value, tending toward that of the wash water used.

In Fig. 2 are plotted curves from data obtained in the washing of two charges of sulphite pulp. In the curve indicated by the crosses the above assumption was in part fulfilled, but a marked "break" was obtained at a fairly low resistance value. The specific resistance of the wash water was 12,000 ohms. The second curve differs considerably from the first yet was approaching it at the end of the wash. It would have been interesting to have continued washing this charge for another hour or two in order that it might have been more favorably compared with the first curve.

Due to the final low resistance, as compared with that of the wash water, it would seem that these charges were not thoroughly washed.

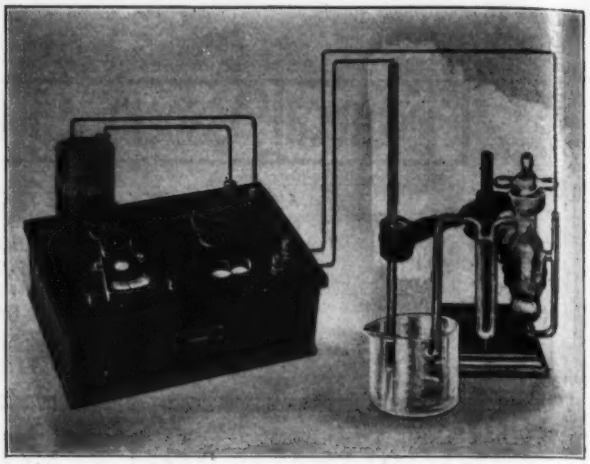

Fig. 5

Washing of Soda Pulp

In Fig. 3 are plotted curves from data obtained on the washing of two charges of soda pulp. It will be noted that the curves more

Fig. 4

Fig. 6

or less coincide, and further, that insofar as the washing was carried the anticipated type of curve was obtained. The resistance was increasing rapidly and in a short time would undoubtedly have approached that of the wash water, indicating a thorough washing.

Portable Conductivity Indicator

The instrument used in making the above measurements is illustrated in Fig 4. This instrument is a portable, self contained Wheatstone Bridge and operates from 110 volt 60 or 25 cycle source. The resistance range which can be covered is from .3 to 30,000 ohms. It affords a convenient instrument for both laboratory and plant use.

pH Measurements

pH measurements are now quite generally used in the paper industry. In Fig. 5 is illustrated a pH indicator designed especially for use with the quinhydrone electrode. The instrument is calibrated in millivolts with a range from—40 to +100 millivolts which with the quinhydrone electrode corresponds to a pH range from about 1 to 9. The accuracy of this indicator is 2.5 millivolts, or .04 pH unit.

The quinhydrone electrode is applicable to solutions which are not more alkaline than 9 and which do not contain highly oxidizing or reducing substances.

A modification of the quinhydrone electrode is available which allows of continuous measurements on flowing solutions within the range of the quinhydrone electrode and which do not contain an appreciable amount of suspended material. Suitable arrangements can be made to obtain continuous pH measurements on such waters as white water from paper machines.

In Fig. 6 is shown a self contained portable potentiometer, which can be used with any type of electrode. This is a very convenient potentiometer in the laboratory, and particularly in the plant where it is desired to make a number of measurements at various points.

G. K. Ferguson Heads Watervleit Paper Co.

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., July 22, 1929.—George K. Ferguson, who July 8 was advanced from the post of assistant manager to general manager of the Watervleit Paper Company, was at the directors' meeting, held Wednesday, July 17, elected president to succeed William M. Loveland, who tendered his resignation several weeks ago and declined to reconsider the matter. The action of the board was unanimous. Mr. Loveland continues as a director of the company.

Mr. Ferguson has been fifteen years with the Watervliet Paper Company, working in the cost department. He is one of the best known cost men in the paper industry. He is a graduate of Kalamazoo College and also did post graduate work at the University of Michigan. He has had the benefit of excellent training and is considered by the directors as eminently qualified for the position.

W. M. Loveland is widely known in the paper industry. He started as a clerk with the Kalamazoo Paper Company, advancing to the position of secretary of that concern and then resigning to take the presidency of the Watervleit Paper Company, supervising the reorganization of the company.

Watervleit a few months ago completed an expansion program, which has resulted in doubling the capacity of the plant, also making it one of the finest paper mills in the Kalamazoo Valley. Both book and coated papers are manufactured and employment is furnished to 450 men and women.

New Corporate Members

The following concerns have recently become corporate members of the Technical Association of the Pulp and Paper Industry: Standard Paper Manufacturing Company, Richmond, Va.; Ontario Paper Company, Thorold, Ontario; Deerfield Glassine Company, Monroe Bridge, Mass.

TAPPI Richmond Convention Committee

Formal plans were made at the Chamber of Commerce Club in Richmond on July 16 relative to the Fall meeting of the Technical Association of the Pulp and Paper Industry which will be held at the Jefferson Hotel in Richmond, Virginia, on September 24 to 26. B. K. Steadman, the general chairman, introduced Secretary Macdonald of the national organization, who led a discussion concerning the many details of handling a convention. Plans are being made to accommodate more than 350 delegates, many of whom are being attracted by the historical and recreational features of Virginia and Richmond, as well as by the mills and papers that they will see and hear. It is expected that a large number of women will visit Richmond, and a special program is being developed that will make the convention a memorable one.

Richmond is unusually well equipped with hotel facilities and the convention will be held in one of the largest and most famous hostelries in Virginia—the Jefferson. Following are the rates that will be effective:

Single rooms without bath—$2.50 to $3 per day.
Single rooms with bath—$3.50 to $5 per day.
Double rooms without bath—$2.50 to $6 per day.
Double rooms with bath—$5 to $10 per day.

The hotel is also equipped with an auditorium seating 1,000; a ballroom, committee rooms, etc. Reservations should be made at once with B. K. Steadman, Standard Paper Manufacturing Company, Richmond, Virginia, who is the general chairman.

The following committees were named:

Administration—O. L. Schweickert, chairman; J. F. Ryland, M. E. Marcuse, A. R. Taylor, H. S. Donald.

Program—J. R. Diggs, chairman; J. P. Massie, C. R. Sevett.

Arrangements—G. A. Carlton, chairman; A. L. Rothchild.

Ladies—B. W. Coale, chairman.

Publicity—J. A. Carter, chairman; T. Pinckney, Clarence Boykin.

Advisory—J. F. Ryland, chairman; M. E. Marcuse, Elis Olssen, F. E. Brown, J. P. Hummel, H. W. Ellerson.

Those who attended were B. K. Steadman, G. A. Carlton, H. S. Donald, J. F. Ryland and A. L. Rothchild of the Standard Paper Manufacturing Company; Elis Olssen of the Chesapeake Corporation; J. R. Diggs and B. W. Coale of the Albemarle Paper Company; O. L. Schweickert of the Bedford Pulp and Paper Company; R. G. Macdonald, Secretary of TAPPI; L. W. Crouse, Paper Makers Chemical Corporation; W. T. Dabney and J. A. Carter of the Richmond Chamber of Commerce.

Bailey Feed Water Regulator

The Bailey Meter Company, Cleveland, Ohio, has issued a new bulletin No. 82 entitled, "Bailey Thermo Hydraulic Feed Water Regulators," in which is described and illustrated thermo hydraulic feed water regulators in all pressure standards up to and nicluding 1,350 pounds per square inch.

While the principle of the thermo hydraulic feed water regulator has been known and used for years, the Bailey regulator described in this bulletin embodies many new and distinctive features never before offered in any type of feed water regulator. The tight-seating piston type of V-port valve as used in all Bailey feed water regulators is described and illustrated. Curves showing the flow characteristics of this valve as compared to other types of valves are also shown in the bulletin.

A Correction

There was an inaccuracy in the Technical Section of the PAPER TRADE JOURNAL of May 9 in announcing the election to membership in the Technical Association of the Pulp and Paper Industry, of Robert J. Marx. The entry should have read as follows: Robert J. Marx, Consulting Engineer, 133 Finsbury Pavement, London, E. C. 2, England. Major Renold Marx was later admitted to membership.

Paper Sizing Patent Review

A Review of the U. S. Patents for Sizing Paper by the Beater Method

By Joseph Rossman [1]

Paper has been sized substantially in two ways, nrst by what is known to the trade as "rosin sizing," which consists of rosin and soda or soda-ash, and when used in the engine is precipitated with a solution of alum on the fiber of the pulp and dried on the machine; second, by animal sizing, which consists of glue or similar material and a solution of alum. In this process the paper is first made, and when nearly dry is run through the sizing, and is afterward dried by atmospheric air at the ordinary temperature. The first method is usually called the beater method since the sizing is added during the process of the paper manufacture while it is being beaten. The second method is called tub sizing since the finished paper is passed through a tub containing the sizing solution.

The usual method of sizing the pulp with the rosin sizing is, in the first place, to saponify the rosin by boiling it with a solution of soda ash or caustic soda, thus making a liquid rosin soap. It is common practice to make rosin size by mixing soda ash with water, adding the rosin in suitable proportions and boiling for four hours in a jacketed vessel. The rosin size thus produced is diluted with water and then added to the beater. The proportion of soda ash varies according as the manufacturer wishes to saponify all the rosin present or only a portion, the free rosin being emulsified in the rosin soap. Prepared rosin size is an article of commerce and is generally sold as containing a definite percentage of free and combined rosin. This size is then added to the pulp in the beating-engine either with or without china-clay, starch and afterward a solution of alum or sulphate of alumina is put in. The result of this treatment is that the alkali of the soap combines with the acid of the sulphate of alumina, and the alumina of the alum and the rosin of the soap are thus freed or precipitated and immediately combine, forming resinate of alumina, which become intimately mixed with the paper-pulp, and on being heated by passing over the rolls of the paper machine, imparts to the paper its hydrofuge qualities, or what is technically termed "sizes" it.

The rosin sizes containing 25 to 30 per cent free rosin and over are more difficult to dilute in water without danger of flocculation of the rosin and mechanical means such as atomizers working on the injector principle are generally used to make down these acid sizes. According to Illig, the inventor of the rosin-sizing process, whose free rosin theory was subsequently supported experimentally by Wurster (Dingler's Polytechnisches Journal 1887), the sizing is effected only by the free rosin, and the most important requirement is to bring the rosin or the rosin acids into contact with the fibres in the finest possible divided state. In accordance with this very plausible explanation of the sizing process, use was frequently made of rosin size alleged to contain free rosin, obtained by boiling the rosin with less alkali than is necessary for the formation of the neutral rosin soap, the rosin being considered to be present in the form of an emulsion. Upon diluting the rosin soap with water before it is introduced into the pulp-engine, more or less turbid liquids are formed according to the alkali content. This turbidity was explained as resulting from free rosin which in the case of neutral size, was supposed to have been formed by hydrolysis, and which, in the case of free-rosin sizes, was believed to be due to the free rosin in an emulsive or very finely divided state.

Patent 1,430,045 states that if the rosin size is mixed with a true vegetable colloid before adding to the beater colloidal precipitation takes place. It can be demonstrated that if a 2 per cent solution of rosin size in water is precipitated with alum, in an equally dilute solution, the precipitate when examined on the microscope, consists of particles or flakes of a definite size but if the rosin is precipitated under similar conditions in the presence of a true colloid no particles can be identified even on the microscope, the precipitate appearing as a continuous jelly. Certain modified starches such as feculose, which is a starch acetate or tester of definite composition effect this colloidal precipitation. The preferred way of carrying out the method is to prepare the rosin size in the usual way but using only about half to three-quarters as much as has been usual heretofore and mixing it with not over 2 per cent of modified starch such as "feculose" which has been previously boiled with six to eight times its weight of water. The mixed rosin size and feculose size is then diluted with water and added to the paper stock in the beater. The feculose is boiled with water to produce a homogeneous colloidal size before it is mixed with the rosin size and if sodium silicate is being used it is advisable to add this to the mixed size rather than to the beater separately. After the rosin size has been thoroughly incorporated with the paper stock in the beater, alum is added to the beater as is common practice.

It has been proposed to substitute the aluminum salts in the rosin sizing process wholly by an acid bisulfate or by mixtures of aluminum sulfate and a bisulfate, but it has been found by experiment that complete substitution does not give useful results, and that mixtures of aluminum salts with bisulfate of soda as previously proposed are also objecionable, as difficulties arise from the two components being added to the pulp at the same time. Patent 1,229,924 proposes to substitute to a great extent for the aluminum salts, niter cake or crude bisulfate of soda which is almost a waste product in the manufacture of nitric acid, hydrochloric acid and some other chemicals, so that the quantity of niter cake or crude bisulfate may be considerably in excess of the aluminum salts. The process is carried out as follows: The size is added to the pulp in the beating engine thoroughly mixed, then a small percentage of alum, say half per cent. to one per cent. of the pulp, is added, varying in amount according to the hardness of the water used, and also to the degree of sizing required in the paper and the class of material employed. After this has become thoroughly distributed in the pulp the niter cake is added, the weight of niter cake used being usually about the same for each class of material as the amount of alum ordinarily employed. After this has become thoroughly distributed in the pulp the niter is added, the weight of niter cake used being usually about the same for each class of material as the amount of alum ordinarily employed, less perhaps the small amount already added. The quantity of alum, however, required varies greatly with dieffrent classes of paper, but this is well known to the trade and therefore the amount of niter cake can be very easily determined.

Fusion of Rosin Size

In the ordinary method of sizing paper with rosin soap containing unsaponified rosin, the sizing effect is largely obtained by the melting or fusing of the rosin while in the web of paper, by the heat of the drying cylinders. In ordinary practice, however, this result is sometimes not attained on account of the fact that the temperature of the driers is insufficient to melt the free rosin in the size. In patent 1,174,697 De Cew states to overcome this difficulty there is added to the free rosin soap a certain quantity of wax, which will combine with the free rosin and become substantially permanently incorporated into the soap. It is difficult to emulsify the rosin soap of this character, and proper temperature control is necessary, so that the dilute solutions will not have a temperature in excess of the melting point of the

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rosin wax composition. The amount of wax incorporated into the rosin soap will of course vary according to the purpose for which it is required, and the character of the paper being made. When it is only desired to produce efficient sizing results, the amount of wax will be approximately in excess of 15 per cent of the weight of the rosin used, but when it is desired to produce a special waxed or semi-waxed paper, the wax may be used in proportions up to 50 per cent of the weight of rosin.

De Cew's Patents

De Cew has found, as stated in his patent No. 1,317,618 by making extensive experiments that in the manufacture of the ordinary water-finished wrapping paper sized with a rosin size, the paper comes to the calenders hard sized, but after the paper is moistened and then dried between steam heated calenders, which are heated to high temperatures and which crush the paper into a semi-translucency by the high pressure, then the water resistance that the paper formerly had from the rosin size is almost totally destroyed, so that the paper can be easily penetrated by water. If, however, the paper is treated in a similar manner with sizing solutions which contain sufficient wax or oil to lower the melting point of the product, so that the mixture of wax, rosin and alumina will fuse under temperatures of approximately 100 to 145 deg. C., obtainable between the heated paper machine calenders, then the paper product becomes molded into a fibrous mass containing a continuous coating over the fibers of a water repellent material. The fusing point of the sizing material will vary slightly, but in general, the temperature of the drying rolls must be approximately that of steam under pressure ranging from five pounds to one hundred pounds, or slightly above the fusion temperature of the sizing mixture. Under these temperatures, an aluminum resinate alone will not melt or fuse and in fact the ordinary aluminum resinate cannot be fused below temperatures which will blacken and spoil the surface of the paper. It is obvious that during the drying process, none of the paper can be heated to a temperature above the boiling point of water at atmospheric pressure, which is 212 deg. F. In order, therefore, to heat the paper to a temperature higher than this point, it must first be dried and then passed over or between steam heated rolls, in order that the now dried sizing material may be fused and allowed to run. This action is preferably done under pressure, such as exists under paper calendering rolls, so that the material may be fused and molded into the fiber.

When any inorganic loading material is used such as china clay, calcium sulphate or talc, it is added to the beating engine either before or after the sizing, in such a manner that there is very little opportunity for the filling material to come in contact with unprecipitated sizing solution. As a result, the unsized filler merely becomes entrapped in the mass of precipitate but the grains or particles of clay or other filler are not themselves coated with the size. Even when the filler is added to the beating engine before the size is added, there is very little sizing action upon the filler itself because there is generally sufficient coagulating action with the water in the beaters to precipitate the size solution before they can react upon the clay. De Cew has discovered according to patent 1,444,956 that an important improvement in the sizing effect can be obtained by allowing the diluted size to react completely with the filling material before it is added to the beating engine. The method is carried out as follows: The clay or similar material is mixed with water in a tank provided with an agitator, previous to its use in the paper mill. Then add to these dilute suspensions, a free rosin soap solution. While these materials are being mixed in the agitating tanks, a physico-chemical reaction takes place between the size and the clay which is called adsorption. By this reaction, the soda in the size is partially taken up by the filler by chemical attraction and the resinous matter surrounding each particle of clay is rendered less soluble so that a considerable portion of the size will be held to the surface of the clay particles. When the dilute mixture of size and clay is added to the beating engine, the size which is not taken up by the clay will distribute itself over the pulp fibres so that in the end the clay and cellulose fibres will be equally water repellent. The reaction between the size and the clay will be greater when there is more free rosin in the size solution and it was found by actual mill tests that paper sized in this manner is more water resistant than those in which nearly all of the size is spread over the pulp fibres alone. The reason that clay has never previously been sized in practice, is the fact that it is generally assumed that the clay could be sized in the beating engine but it is now shown that this rarely takes place and that only a portion of the clay would receive any sizing effect by present methods of operation.

Use of Excess Alum

According to De Cew's patent 1,532,579 in the manufacture of newsprint and similar papers in which no rosin size is used, it is still found necessary to use an astringent such as sulphate of alumina, not for the purpose of coagulating sizing material, but for the purpose of rendering the fibres more astringent so that they will not stick to the presses and cause breaks on the machine when running at high speed. Sulphate of alumina is used in the manufacture of newsprint paper in the approximate proportions of one part of sulphate of alumina to one hundred parts of paper fibre. As the paper stock passes on the machine, however, it is diluted with water in the proportions of about one part of fibre to about two hundred parts of water, the alum, therefore, will be diluted in the proportions of one part of sulphate of alumina to twenty thousand parts of water. At such a dilution the sulphate of alumina will be largely decomposed so that the most of the alumina will be taken up by the fibres by absorption and some of the sulphuric acid is also taken into the fibre but the water running away from the machines contains free sulphuric acid, which will have a tendency to corrode all piping and metallic parts with which it comes in contact, especially when it is used over and over again in the process of manufacture, in which case, the amount of acidity will increase up to a certain point of stability depending upon the amount of fresh water used. In practice, it is fully recognized that the use of sulphate of alumina in a newsprint paper-mill is a constant source of corrosion and wear and tear, both as regards machine piping and also the wires and cotton felts of the paper machine. The method of using this material is to mix ground or precipitated calcium sulphate with the largest amount of water that can be conveniently added to the paper stock, or it may be added directly into the beaters or mixing chest. The process is preferably carried in such a manner that when the diluted paper stock passes on the wire it would contain in solution, approximately twenty parts of calcium sulphate to one ten thousand of fibrous material. It is not desirable to obtain a supersaturated solution but merely a solution which will act almost in the same way as sulphate of alumina because the fibres will take up a portion of this salt by absorption which prevents their sticking to the presses and thus all the technical advantages obtained from sulphate of alumina are duplicated.

De Cew has also discovered that when the size is added to the beater, as is the common practice, it may be coagulated by impurities such as salts of calcium or magnesium, which are present in the water surrounding the stock. These salts may be a part of the natural water or may be extracted from the impurities in the pulp itself. The size is always coagulated in the beater either by earth impurities or by the sulphate of alumina, used for sizing, or both, and is materially injured by the beating action of the Jordan, and the only way to avoid this condition is to keep the size out of the stock until after it has passed through the Jordan. This application may be carried out in patent 1,589,947 by adding the size and alum to the paper stock after it has passed through the Jordan treatment, to the stock which has already been treated with sulphate of alumina in the beater.

In patent 1,621,399 De Cew states that he discovered that rubber emulsions as well as rosin emulsions, can be coagulated by adding to the emulsions a material such as precipitated aluminum hydrate. When this product is freshly precipitated, it acts with its greatest efficiency. Owing to the fact that rosin or rubber

particles in emulsion are negatively charged whereas the ions of colloidal alumina are positive, there is a slow coagulation of the emulsions when these various materials come in contact with each other and a water resistant precipitate is obtained which has very different properties from that which is formed when the emulsion is coagulated by an acid salt. These emulsions can be coagulated even in alkaline solution and this makes the process of particular value for the manufacture of kraft paper or any other paper where acidity is injurious to the strength of the product. In carrying out this process, rosin or rubber emulsions is added to the beating engine in which the paper stock is either neutral or alkaline. After the emulsion is completely incorporated, but not yet coagulated, a suitable quantity of aluminum hydrate is added after which coagulation slowly takes place. After the materials are coagulated, sulphate of alumina may be added without injury to the waterproofing qualities.

It has been proposed to incorporate waterproofing material such as paraffin in the beater stock by forming an emulsion of the paraffin in a more or less saponified aqueous mixture. In practice, however, it has been found commercially impossible to run such a stock on a paper machine, as the emulsion forms a sticky mass which clogs the cylinder mold or Fourdrinier wire, and sticks to the blankets. The saponified mixture holds much water in combination and aside from the trouble from sticking, it is a difficult matter to drive this off by the action of the driving rolls of the paper machine. The paraffin is also contaminated by a comparatively large amount of saponified salts and so fails to be wholly effective in waterproofing the paper.

According to patent 1,592,294 a fine dispersion of paraffin or other waterproof material, however, may be made in an aqueous solution of a nature which permits the waterproofing material to be fixed as fine particles or granules to the fibers of a paper stock and without the production of any sticky substances which may stick to the blankets of the paper machine or clog the cylinder molds or Fourdrinier wire. A paraffin dispersion product may be prepared by melting together paraffin, rosin and Montan or carnauba wax, suitable proportions being 900 parts of paraffin, 100 parts of rosin and 10 parts of Montan or carnauba wax, the Montan wax being somewhat preferable. This melted mixture is then poured into a solution of silicate of soda comprising 200 parts of silicate of soda and 1500 parts of water, the mass being thoroughly stirred and agitated while the mixture is being heated. While continuing the stirring the mixture is then cooled suddenly below the melting points of the waxes and rosin as by means of the addition of 2250 parts of cool or cold water, the stirring being continued until the wax and rosin appears as finely dispersed particles in the solution.

The procedure in the production of the paper is as follows: 5 to 45 parts of paraffin dispersion product, made according to a method heretofore described, are added to 55 to 80 parts of beaten sulphite pulp and thoroughly mixed therewith, 5 to 25 parts of alum or other precipitant may then be added and mixed in for a few minutes to form a flocculent precipitate with the silicate which acts to fix the dispersed material on the pulp. The sodium silicate acts as a coagulant to fix the dispersed particles over the fibers. The stock may then be run off on the paper machine and may be passed over heated calender rolls which causes the dispersed grains to flux together throughout the material. This stock is found to run as well or better on the paper machine as if the paraffin were not present. No water is held mechanically combined so that the sheeted stock is readily dried by the usual dryer rolls of the paper machine. By heating the sheet so prepared above the melting point of the dispersed material in the fluxing operation, the particles coalesce and form an unbroken layer of waterproof and water repellent material entirely surounding each fiber and filling the interstices between the fibers. The resultant product, water repellent comparable in this respect to paper which has been dipped in melted paraffin.

Historical Review of Patents

The following abstracts give a survey of the U. S. methods relating to sizing by the beater method.

1. Turner 8,698. January 27, 1852

The method of passing the paper through a trough of size between two endless felts or other fabrics thereby obtaining a perfect and uniform saturation of the paper, and protecting the paper from all injuries during the process of sizing and pressing.

2. Glynn 12,361. February 6, 1855

The process consists in introducing into the pulpy mass soluble soaps of wax or fats, converting the same into insoluble soaps within the pulp by means of soluble salts, for the purpose of preventing forgery, mildew, and the action of insects, rats and vermin.

3. Brown 23,897. May 10, 1897

The invention consists in incorporating or combining glycerine with the pulp from which paper is to be made, or with paper at any stage of its manufacture, or in coating paper after its manufacture with glycerine. To a quantity of pulp and size sufficient to produce one hundred pounds of paper when dry is added about five pounds of glycerine of a specific gravity of one and sixteen one-hundredths, and well mixed in the pulping-engine or otherwise.

4. Mayhoffer 25,975. November 1, 1859

Mixing an alkaline solution of rosin with moisture proof paper made by the pulp, and then adding what is known as "English sulphuric acid," and after the sheets have been formed drying them by contact with heated metallic surfaces.

5. Allen 53,094. March 13, 1866

A pulp and paper made from vegetable fiber containing a large proportion of its natural gum when pulped, in combination with pulped untanned animal fiber, and this whether mixed or not with other foreign resinous substances.

6. Irving, McNeil, Rich and Fay 60,635. December 18, 1866

Paper manufactured from manilla or hemp rope in the following manner: The rope is first cut into pieces two inches in length; after which it is put into a revolving or rotary boiler, and boiled in a solution of alkali, under a steam pressure of twenty pounds to the square inch, for fourteen hours. From thence the mass is passed to the pulp engines, where, when reduced to what is called half pulp, it is saturated with a solution of gum catechu and borax, in addition to the usual rosin sizing. In passing over the paper machine, and before entering the second press rolls, the paper is passed through a solution of alum and borax, which closes up the surface, making the paper nearly water and fire-proof.

7. Marshall 70,872. Novemeeb 12, 1867

Flour is obtained by taking chips of the planing machine, or the ordinary sawdust, articles in themselves of no value, and grinding them to a powder in a burr or steel mill. A flour as fine as that produced by bolting wheat can thus be produced. In order to manufacture paper, about seventy per cent of the flour prepared as above described is mixed with about thirty per cent of paper-pulp, scch as is obtained from linen, cotton, hemp, or any other fibrous vegetable matter. The pulp and flour are mixed and made into paper.

8. Lawrey 71,892. December 10, 1867

Starch is added to the pulp before it is made into sheets.

9. Lawrey 89,054. April 20, 1869

The invention consists in giving fibrous fabrics a water-repellent character by the incorporation of a lime and grease compound during their manufacture. This compound is made by taking any quantity of quick-lime desired, slacking it with water, and while the process of slacking is going on and the lime still warm and in a mastic state, by adding from one to three ounces of grease, oil, or fatty substance of any kind containing fatty acids, and thoroughly mixing them.

10. Pemberton 105,594. July 19, 1870

The invention consists in employing, in the manufacture of paper, wherein sulphate of lime enters as an ingredient, the

saturated or partly-saturated solution of sulphate of lime in place of ordinary water, whether the solution is obtained by collecting the water escaping from the paper machines, (in which calcium sulphate has been used or employed a second time,) or by purposely and intentionally making in a separate vessel a saturated or partly-saturated solution of sulphate of lime, and then using the same, or by producing in the hollander or other part of the paper machine a saturated or partly-saturated solution of calcium sulphate by adding some other and cheaper form of sulphate of lime, so as to saturate, in part or whole, the water used in the manufacture of the paper before the introduction of the more expensive and more fibrous artificially-prepared sulphate of lime.

11. Sawyer 109,766. November 29, 1870

A pulp is made from the vine or tops of the common potato. The addition of one-fourth or one-third of this pulp to that obtained from wood and other vegetable substances materially increases the strength of these when made into paper.

12. Tiemann 123,747. February 13, 1872

The process of introducing alum into paper by introducing the same into the vessel containing the paper-pulp, and causing it to come in contact, in solution, with and penetrate the fibrous matter, and then by the addition of caustic lime to form a precipitate within and upon the surface of the fibers.

13. Dorlan 127,858. June 11, 1872

The invention consists in using chloride of lime as a sizing ingredient, in combination with the resins, soaps, starches, oils, tallows, and alums, separately or collectively.

14. Arnold 130,615. August 20, 1872

The combination of reed-cane, disintegrated by the explosive force of steam, and straw pulp or hard stock treated with rosin size and alum in the rag engine, for the production of paper sheathing-felt.

15. Karcheski 149,318. April 7, 1874

The invention consists in submitting paper in the web before it is dried, first, to a bath of vegetable size containing ultramarine or other coloring matter, and then to a bath of animal size, which may or may not contain coloring matter, and in removing the superfluous size by scraping, and in drying the product upon the heated cylinders of the paper-machine, so that the complete operation of manufacturing paper which is both sized and colored is conducted with only one drying process, irrespective of whether the paper is more or less hard sized or enameled; and further, so that earthy matter contained in the colored vegetable size is distributed upon a web composed solely of paper-pulp, filling its pores and cavities, and thus producing a smooth, evenly-colored surface, upon which the animal size is subsequently deposited in a thin pellicle. The colored vegetable size, which if first administered to the fabric operated upon, consists of bleached rosin dissolved by heat in the least possible quantity of alkalies and water, with the addition to the solution of a quantity of colorless earth and soap and ultra-marine or other coloring matter. The animal size consists of a solution of glue, alum, tallow, or other soap, colorless earth, a trace of chloride of sodium, and if desired, ultramarine or other coloring matter. The coloring matter should be ground with the colorless earth, and then mixed with the size. This mode of coloring paper prevents the presence of blotches and spots, which almost invariably appear upon the surface of paper which is blued or colored in the pulp.

16. Karcheski 149,319. April 7, 1874

The process of treating paper with vegetable and animal sizes successively, the vegetable size being combined with an excess of fatty acids, and the animal size with an excess of alum or sulphate of alumina, for the purpose of rendering the fabric operated upon water-repellent.

17. Duemling 157,198. November 24, 1874

The process of filling paper-pulp fiber by first applying chloride of barium in the mixing-vessel; secondly, sulphate of magnesia; thirdly, chloride of magnesium; and fourthly, silicate of soda, at the intervals.

18. Vining 223,459. January 13, 1880

A sizing which consists in the use of casein, either animal or vegetable, brought to the proper or required consistency by triturating with or heating a proper time in a saline solution of soda or potassa, as preferred. Borax in any proportion required is used, extracting the casein from skimmed or skim milk by the use of acetic or other acids, by the use of rinnet.

19. Ehrhardt 228,328. June 1, 1880

The process of manufacturing tough or so-called parchment paper, consisting in adding during the stage of the manufacture of paper when the pulp is ready for the size, a quantity of silicate of soda and chloride of zinc, also a little more alum, sufficient to allow the chemical action between the silicate of soda and alum.

20. Burton 250,781. December 13, 1881

The manufacture of sized paper by the use of glucose as a sizing and mixing it with the pulp or applying it to paper as it is passed through the rolls.

21. Minor 251,062. December 20, 1881

A process of sizing paper and paper-stock by the use of the mucilage extracted from Irish moss, in combination with animal sizing, the whole being precipitated on the fiber of the pulp in the engine by means of a saturated solution of alum.

22. Carpenter 253,840. February 21, 1882

A paper made from a combination of paper-pulp and a plastic water-proof material—such as celluloid, lignoid, or similar plastic water-proof material. The paper may be put through a vapor-bath of alcohol or rapidly through a weak alcoholic bath when the water-proof material used—such as celluloid—is capable of being dissolved in alcohol. The object of the bath is to partially dissolve on the surface any of the materials which may not be well united by mixing and the action of the heated rollers.

23. Weygang 307,607. November 4, 1884

The process for treating fibrous materials, consisting in applying dissolved glue to fibrous pulp, then adding one or more astringent metallic salts or non-metallic elements, and then adding a caustic alkali or alkaline earth or a salt of the latter.

24. Mitscherlich 336,013. February 9, 1886

The method of sizing paper materials consisting in precipitating into aqueous fiber pulp, resin soap, or glue by means of solutions of tanning materials.

25. Kellner 352,759. November 16, 1886

The process of sizing paper, which consists in mixing resin soap with the pulp and precipitating the resin size by a sulphite salt.

26. Menzies 405,269. June 18, 1889

The method of sizing pulp, which consists in saponifying rosin by treating it with aluminate of soda, adding the solution thus prepared to the pulp in the beating engine, and then decomposing it by adding a solution of magnesium sulphate.

27. Manzies 452,143. May 12, 1891

In the manufacture of paper the method of precipitating alumina in the pulp in the beating-engine, which consists in adding to the pulp aluminate of soda, in conjunction with sulphate of alumina or its equivalents, the soluble salts of magnesia or calcium.

28. Fielding 708,760. September 9, 1902

A process consisting of the admixture of a suitable bisulphite with viscose (cellulose sulfocarbonate) and the incorporation of the mixture with fibrous pulp in the manufacture of paper, and subsequent drying and steaming to complete the decolorization and fixation of the viscose.

29. Von Schmaedel 792,932. June 20, 1905

Printing-paper containing a soluble glucoside such as saponin introduced in combination with a rosin emulsion containing fifty to six hundred grams saponin to one kilogram resin.

30. White 852,918. May 7, 1907

The invention consists in loading the fibrous pulp from which

the paper is to be made with pulverized mica, and then continuing the operation of manufacturing the paper in the ordinary way. The result is a paper containing any desired proportion of mica throughout its structure, admirably adapted for electrical insulation purposes.

31. Rogers 980,425. April 11, 1911

Paper impregnated with a lubricant consisting of a soluble, fatty acid soap, there being about 2 per cent of said lubricant to the paper material.

32. Wagg, Wagg and Wagg 1,032,973. July 26, 1912

The process of sizing paper material which consists in treating the material while in the form of wet pulp with a solution of resin size; drying the subsequently-formed web; immersing the dried web in a bath of starch size; drying the sized web; immersing said web in a separate bath of glue size; and finally in passing the web thus treated around a series of slowly revolving skeleton drums through which a current of warm air continuously circulates to subject the web to a prolonged and gradual drying.

33. Marr 1,046,475. December 10, 1912

The process of making paper which comprises treating vegetable matter with zinc chlorid so as to change the more easily attackable carbohydrate constituents into a cementitious material to bind the remainder together, and then finishing the paper.

34. Tinberg 1,048,110. December 14, 1912

The process of weighting and simultaneously sizing and increasing the strength of articles made from paper pulp which comprises treating such pulp with freshly slacked lime and combining the same with the pulp by thorough intermixture of the solid slacked lime with the pulp without the aid of additional neutralizing agents.

35. Wagg 1,117,113. November 10, 1914

In the process of manufacturing high-grade paper, the successive steps of producing an engine-sized web, passing such web immediately after its removal from the Fourdrinier machine through a bath of gelatin size, winding the wet web into a roll, allowing the rolled web to rest, in a wet state and under normal conditions, for a predetermined extended period of time, to permit a very gradual and thorough permeation of the web by the gelatin size and union of the said gelatin size and the engine size, and drying the web.

36. Lagermarck & Sverdrup 1,161,696. November 23, 1915.

A method of making innoxious the resin contained in cellulose which is intended for the manufacture of paper or for similar purposes, characterized by a filling substance (such as talcum, kaolin, sulphate of barytes or the like) being added to the cellulose only when the latter—after having left the boiler and after having been rid of the boiling liquid and washed in the hutches, but before the addition of diluting water has taken place—is to be subjected to the treatment in the separators and succeeding devices, whereby the particles of resin, in a state of fine distribution throughout the mass, are enveloped by the filling-substance so as to lose their adhesive properties.

37. De Cew 1,174,697. March 7, 1916

A process of making non-separating water-proof sizing composition which consists in permanently emulsifying wax and rosin when the wax is in excess of 15 per cent of the weight of the rosin, for the treatment of paper stock in the beating engine.

38. Muth 1,194,866. August 15, 1916

The process of manufacturing a paper size, which consists of melting artificial resin obtained from coal tar and natural resin and maintaining the mixture in a molten condition until frothing thereof has ceased, and thereupon boiling the mass with alkalies until a uniform emulsion is formed.

39. Wheelwright 1,195,888. August 22, 1916

The method of sizing paper, which consists in forming the web, wet pressing it to extract part of the moisture, treating both surfaces simultaneously to a size of converted hydrolyzed starch or starch compounds coming from different sources before it is otherwise dried, and thereafter drying the web.

40. Statham 1,209,221. December 19, 1916

High bulk sized wood pulp paper containing over 20 per cent of finely divided light precipitated chalk loading material having when dry a weight of not more than about eighteen pounds per cubic foot and substantially uniformly incorporated throughout the paper pulp during the formation of the paper so that the weight of the finished paper of standard thickness is substantially unchanged by the loading.

41. Fish 1,229,924. June 12, 1917

In the process of sizing pulp for the manufacture of paper and the like, thoroughly mixing the requisite quantity of resin size with the pulp and adding a small quantity of a soluble alumina salt, say half per cent to 1 per cent of the stuff in the beater, and when these are thoroughly mixed adding bisulphate of soda or niter cake.

42. Haeffner 1,231,153. June 26, 1917

Method of sizing paper, cardboard and the like consisting in adding to the pulp fermented sulfite liquor, resin soap and a substance capable of precipitating sizing matters from said liquor and soap, and incorporating the precipitated matters into the pulp.

43. Goodenough 1,257,996. March 5, 1918

In the process of making newsprint paper the addition in the mixing tank of approximately two pounds of sal-soda to approximately every fifteen hundred pounds of paper stock.

44. Clapp 1,280,400. October 1 ,1918.

The process of making a fire and water resisting fiberboard stock, which is characterized by treating vegetable material with a solution of caustic alkali so as partially to dissolve said material; mixing the solution and residue thus obtained with fibrous cellulose in water; beating out the mixture thus obtained to reduce the fibrous cellulose and other solid matter therein to a finely divided state; and adding aluminum sulfate to the mixture at some time during the process, to precipitate the vegetable material dissolved in the caustic alkali solution, said precipitate and the undissolved vegetable material being distributed throughout the stock and rendering the same fire and water resisting.

45. De Clew 1,300,357. April 15, 1919.

In carrying out the invention, approximately from two to five pounds of sodium aluminate is added to one thousand pounds of paper stock in a beating engine prior to the sizing treatment. The material is then thoroughly mixed by the beater. It will be obvious, however, that the sodium aluminate may be mixed with the paper stock in a mixing chest or in any other suitable way prior to putting it in the beater. When paper fibers treated in this way come in contact with solutions of rosin size containing free rosin in the colloidal state, this colloidal rosin will be deposited upon them in association with the alumina already absorbed, and thus a combination of these materials is obtained which effects most efficient sizing results. This coating, along with the rosin precipitated with alum, also gives the fiber a more water repellent character than that obtained solely from the precipitation of the rosin soap by means of alum.

46. Perry 1,302,209. April 29, 1919

The process comprises adding to the usual watery pulp of beaten rags or paper or a mixture of the two, of other fibrous or paper-making material in the form of a watery pulp, a predetermined amount of subdivided or comminuted resinous material, in solid form, preferably rosin. Various resinous materials, such as rosin, paracumarone, and bakelite, may be employed.

47. De Cew 1,317,618. September 30, 1919

A process which comprises incorporating with fluent paper stock, sizing composition containing rosin size and wax, and an aluminum compound capable of precipitating the same, making the material into paper, drying the paper, and heating the same to a degree sufficient to melt the rosin-oil-alumina compound by

passing the same between heated pressure rolls maintained at a temperature above 100°C., whereby the molten material spreads itself, in fluid condition, throughout the body of the paper.

48. De Cew 1,317,619. September 30, 1919

A method of sizing paper in a beating engine, which consists in adding approximately one pound of soluble alkali to twenty thousand pounds of water, whereby any dissolved calcium or magnesium salts present in the water will not react with sodium resinate, then adding a resin size and finally precipitating it with aluminum sulfate.

49. Baumgardner 1,334,513. March 23, 1920

A composition for paper-stock, comprising paper-pulp and powdered oyster shells in about the proportions of five parts of the former to one part of the latter.

50. Davidson 1,344,620. June 29, 1920.

The process of preparing pulp having wax impregnated fibers from waste waxed paper, consisting in mixing together enough heavily coated or saturated waxed papers with those carrying a lighter proportion of the wax to have enough waxed fibers to impregnate with the wax liberated from the waxed portions of the papers substantially all the unwaxed fibers that may be present in the mixture adding enough water to reach all parts of the mixture, and cooking and agitating the mixture in a rotary cooker under a steam pressure of approximately thirty or forty pounds to the square inch.

51. Clapp 1,345,476. July 6, 1920.

The process of producing waterproof paper, which comprises mixing calcium hydroxide with fibrous paper stock, mixing a soluble soap therewith and precipitating calcium soap throughout the mass of stock, then mixing sodium resinate with said mass, and adding and mixing alum into the mass and thereby precipitating aluminum resinate therein.

52. Miles 1,367,274. February 1, 1921

The method of treating paper stock, which consists in introducing an emulsion, of solid particles of unmodified paraffin wax with a size into the water vehicle in which the paper fiber is distributed at a stage in the progress of the fiber in advance of formation of the paper web, thereafter precipitating the size on the fiber with the paraffin wax, thus incorporating the paraffin wax with the fiber and finally into the paper web.

53. Hoskins 1,370,650. March 8, 1921

The process of preparing water-resistant paper or board which consists in adding to the stock during beating, a suspension of an insoluble soap, the quantity of soap being 0.1 to 1.5 per cent of the fiber in the stock, and subsequently forming the paper or board therefrom.

54. Peabody 1,376,353. April 26, 1921

The process of making a paper which consists in adding a cementitious material to a mass of fibers mingled with water in a preliminary container to form a stock, and adding a collodial substance to the water in the tank into which said stock is run and from which it is supplied to a machine for forming the product, the proportion of colloidal substance added to the water in the tank being substantially similar to the proportion of cementitious material to water in the stock before it is run into the tank, and forming the paper.

55. Peabody 1,406,410. February 14, 1922.

The process for making fiber board which consists in thoroughly mixing a batch of fiber with water and thereafter adding liquid cellulose to the batch of fiber while suspended in water, manipulating the whole until the cellulose is uniformly distributed, then extracting the water, then treating the material with a solution of a deliquescent salt and allowing the material to dry.

56. Acheson 1,419,951. June 20, 1922.

In a process of making filled papers, the steps consisting in incorporating with the pulp an initially-deflocculated filling material and precipitating the same in conjunction with a sizing material and in presence of the fibers by the addition of an electrolyte.

57. Wheelwright 1,430,045. September 26, 1922

The method of sizing paper which consists in treating the paper pulp in the beater with a mixture of rosin size and not over 20 per cent of previously boiled modified starch and additional silicate of sodium and subsequently adding alum.

58. De Cew 1,444,956. February 13, 1923.

A method of sizing loaded papers, which consists in sizing the filler and paper stocks separately, the filler being sized in aqueous suspension by mixing into it a dilute aqueous solution of a free rosin size. The partially sized filler is then added to the paper stock which is then also sized in the same manner, the size being finally precipitated by the addition of sulphate of alumina.

59. Castner 1,499,291. June 24, 1924.

The method which consists in commingling sulphite wood pulp with approximately ten per cent of paraffin and water, thereafter adding additional water to the mass and thoroughly agitating the same, adding further water, and then forming the mixture into sheets, drying the sheets in a moist atmosphere, and subjecting the sheets to pressure.

60. De Cew 1,532,579. Apr. 7, 1925.

The process of treating paper-making fibres to be used in a slack sized paper, to render them more astringent, which consists in bringing them into contact before or during the paper-making process with an aqeous solution of calcium sulphate in which there is more calcium sulphate than in natural mill water, but not enough to act as a filler for the paper.

61. Pelzer 1,550,632. August 18, 1925.

The method of sizing paper in the pulp, which consists in so controlling the concentration and regulating the alkalization during sizing that a maximum of acid salt of the formula: $C_{36}H_{38}O_3N_2C_{36}H_{38}O_3$ is produced in the solution.

62. De Cew 1,558,846. October 17, 1925.

The method of sizing paper which consists in withholding the precipitation of the rosin until after the beating action of the jordan engine is complete.

63. De Cew 1,558,846. Oct. 27, 1925.

A method of sizing paper pulp, which consists in treating the pulp with emulsions of rosin soap, then adding a colloidal aluminum hydrate, and after this has coagulated the emulsions, adding sulphate of alumina.

64. De Cew 1,578,045. March 30, 1926

A method of preparing cellulose fibres for paper making, which consists in beating and Jordaning the cellulose in water contining cold dilute soluble caustic alkali and then sizing the fibres by a special series of operations in which the alkalinity is neutralized.

65. De Cew 1,585,469. May 18, 1926.

A method of sizing paper pulp which consists in a continuous mixing treatment of rosin size emulsions and paper making fibers, within the Jordan engine, the fibers already having been made astringent by previous treatment with sulphate of alumina.

66. De Cew 1,589,947. June 22, 1926.

A method of sizing paper, which consists in adding a size solution to the stock after said stock has been treated by the Jordan.

67. Clapp 1,592,294. July 13, 1926.

The method of producing a waterproof and water repellent paper, which comprises the melted mixture into a hot silicate and Montan wax, pouring the melted mixture into a hot silicate of soda solution while agitating the same, and adding cold water while continuing the agitation to solidify the paraffin, rosin and Montan wax in finely dispersed condition, adding the resultant product to fibrous beater stock, adding a precipitant capable of coagulating with the silicate of soda to fix the dispersed materials on the fibers, sheeting on a paper machine, and subjecting the sheet to a temperature above the melting point of the paraf-

fin, rosin and Montan wax to cause them to coalesce throughout the sheet.

68. Rafton 1,595,416. August 10, 1926

A paper comprising fibrous material and a filler consisting of calcium carbonate and magnesium basic carbonate, in an extremely minute state of subdivision, and suitable sizing on the surface, whose surface is coated with a material consisting of calcium carbonate and magnesium basic carbonate, in an extremely minute state of subdivision, and an adhesive.

69. Suwwers 1,597,840. August 31, 1926

Hydrolyzed paper pulp containing an appreciable amount of phosphoric acid compounds.

70. Rafton.. 1,598,104. August 31, 1926

A paper comprising fibrous material and a filler or loading incorporated uniformly throughout consisting of a composition of matter composed of calcium carbonate and magnesium hydroxide, in an extremely minute state of subdivision, sizing incorporated uniformly throughout and in addition, sizing on the surface thereof.

71. Ellis 1,607,517. November 16, 1926

A process for making waterproof paper, which consists in the addition of an aqueous wax dispersion to a pulp containing hydrocellulose, in a beater engine, at a temperature of approximately 80 to 100°C.

72. Ellis 1,607,518. November 16, 1926

A process for treating paper pulp which contains hydrocellulose comprising the adjustment of the hydrogen ion concentration of said pulp so as to increase the absorption of a wax emulsion.

73. Ellis 1,607,519. November 16, 1926

In the process of making sheets of paper, pulp board, card board, wall board, and the like, the step which comprises incorporating with the paper pulp prior to its formation into sheet form a quantity of rosin size, setting the size, incorporating milled wax and setting the wax.

74. De Cew 1,621,399. March 15, 1927

A method of coagulating rubber emulsions on paper making fibres while preparing the stock for the paper machine, which consists in mixing the rubber emulsions with the fibers in the presence of a previously precipitated aluminum hydrate formed by adding a soluble aluminum salt to a soluble alkali.

75. Sveen 1,622,474. March 29, 1927

Process of promoting agglomeration of particles suspended in an aqueous liquid comprising the step of incorporating a small proportion of dissolved gelatinous substance and a lignine derivate into the liquid containing particles in dilute suspension as well as a substance able to effect coagulation of colloids.

76. Davidson, Rippey, Cone, Laucks and Banks 1,622,496. March 29, 1927.

The process of making a cellulose fiber product of treating the product with a size having soy bean flour as a base, and passing the product through a bath containing formaldehyde in dilute aqueous solution, picric or tannic acid.

77. Hilton 1,624,599. April 12, 1927

The process of manufacturing weather resistant fiber board, which consists in thoroughly mixing fiber pulp in an equeous solution of soap and treating the pulp with lead acetate to precipitate insoluble lead soap in intimate admixture with the fiber, the quantity of soap required being sufficient to provide approximately not over three per cent by weight of insoluble soap on the basis of the pulp used.

78. Rawling 1,630,635. May 31, 1927

In the pulping of vegetable fibrous material containing organic acids the process of making lighter the color of the pulp after it has been treated with apparatus containing parts formed of iron and dark colored iron and acid compounds have been formed, which process comprises adding an oxide of an alkaline earth to the pulp and effecting a reaction between the alkaline material and the acid and the formation of ferric hydroxide with resulting lightening of color.

79. McIntosh 1,631,750. June 17, 1927

The process of making a paper product which comprises adding cellulose acetate to the paper and rag fibers prior to the Fourdrinier machine, processing the paper in the usual manner, parchmentizing the paper, leaching out the parchmentizing agent with water, and thereafter subjecting the parchmentizing sheet to the action of a solvent for the cellulose acetate whereupon the solvent displaces the water in the pores and causes a film of the cellulose acetate to form in the parchment membrane.

80. Finley 1,641,478. September 6, 1927

The process of treating a formed wet sheet of paper which comprise flowing a solution of sodium chloride upon the surface of the wet sheet, subjecting the opposite surface to a vacuum to displace the water normally present in the sheet with the solution, and evaporating the water to crystallize the salt upon the fibers with interlocking effect.

81. Barnard and Caswell 1,648,838. November 8, 1927

The process of treating cellulosic pulp in the formation of paper, which comprises beating the cellulosic pulp to effect the hydration thereof in the presence of ammonia, increasing the ammonia content of the pulp after beating ,and then adding a soluble metallic salt.

82. Mahler and Rothchild 1,650,022. November 22, 1927

The process of paper making which consists in digesting china clay with sulphuric acid in presence of sufficient water to facilitate stirring of the mass and to prevent caking, heating the mixture at a temperature above 100°C. for a sufficient length of time to produce a solution of basic alum and subsequently adding the contens of the digester to the stuff.

83. Harvey and Becher 1,651,388. December 6, 1927

A compressed sheet comprising a mixture of 100 parts by weight of fibre and from 43 to 100 parts by weight of red accaroid gum.

84. Hans 1,662,641. March 13, 1928

In the manufacture of paper in a continuous web, the process of sizing which includes the spraying of a sizing solution upon a surface of the advancing sheet after the bulk of the moisture has been squeezed therefrom and as the sheet is passed about a preliminary drying roll, of then passing the sheet with the sprayed surface in contact with another drying roll and of then spraying the surface with a size precipitating solution as it is passed about another preliminary drying roll, all in advance of the passage of the sheet to the final drying rolls.

85. Bradshaw 1,672,705. June 5, 1928

A process of making a sized cellulose fiber product which comprises treating a cellulose fiber material with a size which has as a base peanut meal and casein, and contains also flour, oil, or pigment.

86. Blombery 1,675,244. June 26, 1928

A paper sheet or board formed from a composition consisting of fibrous stock incorporated with kelp pulp and containing glycerine, having the surface thereof treated by application thereto of liquid obtained by macerating or digesting kelp.

87. Rose 1,675,959. July 3, 1928

A process for making fibrous sheet material which comprises beating a paper making fibre in water, adding an alkaline dispersion of rubber in water containing sodium resinate, mixing the suspension and the dispersion, slowly acidifying the mixture by the addition of alum solution, permitting the positively charged resinate thus formed to carry the dispersed rubber toward and onto the fibre, and subsequently forming into sheet material.

88. Becher 1,678,720. July 31, 1928

The process of treating fibers as a preliminary step to shaping the same which comprises adding water, tannic acid and a soluble metallic soap to the fiber, beating the fiber and then precipitating the soap onto the fiber by means of a metallic salt.

Section of the

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THOS. J. BURKE, C. A., Sec.-Treas.

Time As a Cost Factor in The Industry*

By Thomas J. Burke[1]

When I advised Harry Bradford that I would talk on this topic at this meeting, I had not seen a copy of your program, from which I have noted since, that an address is to be given by Herbert Davy on the "Rejuvenation of Cost Figuring by Means of Time Study Data". I mention this, because it is possible that both of us had the same thing in mind when choosing our topics. However, I propose to treat this from a very broad viewpoint, while Mr. Davy will deal with the more detailed operations, where time study can be used to advantage.

My thought in choosing this topic, had something to do with the fact, that last month I gave an address in Springfield, on the subject of "Capacity and Costs", and in that address made the suggestion, that all paper mills should adopt a 6600 hour year. The importance of this lies in the fact, which is common knowledge, that in our industry we have a large investment in fixed assets and consequently a big depreciation item, and other fixed costs which are distributed on a time basis rather than a use factor. In this previous address, I pointed out the differences that arise as a result of different mills figuring all the way from 6000 hours per annum to 7440 hours per annum. We find there is a difference of 24 per cent between 6600 hours and 7440 hours, which is an item worth considering, when you remember that what we are really selling is the time of our paper machines. In this connection I might mention here, that there are a number of our leading executives, (and I call to mind at this moment particularly Mr. D. Clark Everest), who insist upon having in their cost sheets, a column specifying the profit per hour, as well as the profit per ton. This, of course, is an important figure, and one that should be closely followed:

Depreciation

I would like to touch on the harrowed subject of "Depreciation" for a few minutes, because after a study of the returns sent in to me in response to the questionnaire sent out last year, asking for information on this subject, it seemed quite clear that before any thing could be done in an effort to draw up a standard set of depreciation rates for use in our industry, (even providing we were to allow as suggested by the Commissioner of Internal Revenue a variation of one fifth below or above such rates), it would be necessary for us to do a good deal of educational work, in order that a substantial agreement might be reached by a large majority of the mills in our industry. Circumstances alter cases, and they certainly do as regards the rate of depreciation we should allow on our machinery and equipment. I don't say buildings, because with but few exceptions, there seems to be a substantial agreement as to depreciation in this connection, namely, 2 per cent or 3 per cent on cement, brick or mill type buildings, and 4 per cent to 5 per cent on frame or wood buildings of various kinds. In any event, the range is not wide, and personally I believe there would not be a great deal of difficulty in reaching an agreement about buildings. The variation of one-fifth above or below the rate would very nearly take care of the rate differences now existing, but when we get into the "rate" question for machinery and equipmnt, we find very large differences. It is impossible for me to read you a list of these different rates, and I don't think that you are particularly anxious to hear them. Of course, the fact is, that we should all know exactly how we have spent the funds invested in our fixed assets. It's strange that the importance of this is not more generally recognized. Keeping a Plant Ledger is essential, in my opinion, to good business practice. To do this, satisfactorily, not only requires that when the expenditures are made they should be passed on by a competent engineer, and dealt with by a competent accountant, so that they may be charged to the proper accounts, but involves the necessity for giving similar attention to all later expendtiures made for these items. In other words, it requires a follow-up system, so that those expenditures which should be capitalized are not charged to expense, and vice versa. Sometimes it is extremely difficult to decide just how much shall be capitalized and how much shall be charged to expense.

In dealing with such problems, the accountant as we have so often discussed and explained, should set up a Plant Ledger, dividing the items into the different departments, also separating them according to machine, kind of equipment, etc. After this is done, we know just how much is invested in each department, and we know just how much is invested in each kind of machine, and each kind of equipment. We can then apply the various rates of depreciation for the different machines and equipment, and charge the different departments with their prorata share of this depreciation monthly, or by four weekly periods, if you prefer.

Now time is a very hard taskmaster at best, and none of us can turn back the hands of the clock, unless we have put them forward, as in daylight saving. Every day that passes means that a certain value has gone out of your mill, whether the machines have been running or not. In fact, I am in some doubt as to whether there is a very large difference between the amount that should be written off for depreciation when a mill is running or when it is shut-down. We are living in a speedy age, and to make a profit you have to keep up with the procession, so that even if we shut a mill down, while the machinery and equipment may have been taken good care of during the shut-down, just so much time has been wasted in the life of that equipment, and it is just that much

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* Address given at Park-American Hotel, Kalamazoo, Mich., on May 17th, 1929, at Interstate Meeting of Kalamazoo Division of Cost Association of the Paper Industry and the Paper Technologists Club of Kalamazoo.

behind the procession. I might mention in this connection, a talk I had recently with the President of a large company, which is charging 10 per cent depreciation annnually on its machinery and equipment. I asked about this, saying that it appeared to be rather a high rate in comparison with many others I had seen. This gentleman told me, that in his opinion, by charging less than this rate these mills were losing out just so much in the race for progress and profits. He told me that he believed he was correct in stating that there was practically no machinery or equipment in their mill that was over ten years old, although the mill has been in existence for a number of years. He said they are constantly improving their machinery and equipment whenever they felt it was necessary to make a change, in order to give the best possible service to the public, and to supply them with paper at the lowest practical price possible, consistent with fair profits to themselves. He stressed this latter condition and lives up to it. So I bring you this message on depreciation.

Possibly many of us have been fooling ourselves on this matter. Personally, I have felt that if we are going to charge depreciation on a blanket or "over-all" rate, as so many mills do, that 6 2/3 per cent, which contemplates a 15 year life, or 7½ per cent, which contemplates between 13 and 14 year's life, would be a fair rate. However, I bring this point up for discussion to you, and should be glad to have your opinion about it. As I said before, time passes and our working tools get out of date and thus depreciate just as much in value as if they were worn out. In our arguments with the Government Officials we ought to place more stress on this point, that while a machine may be in good running repair, it may be of little use, because of the fact that it is too costly to run under present competitive conditions.

Thirteen Month Calendar

Those of you who attended the February Convention will remember the address given by Seth Bush on this subject, and following this address, the American Paper & Pulp Asosciation passed a Resolution in favor of this country being represented at any conference that might be called, to study the possibilitites of the adoption of an International Fixed Calendar of 13 Months. You probably know that there are a fair number of paper mills that have been working on the basis of 13 four weekly periods, for some years. I believe this is the best basis for cost and statistical purposes, and therefore that an address on the subject chosen, should contain a reference to this matter. Whether this Calendar is adopted or not, I would like to see all mills adopt this principle of 13 four weekly periods, for accounting and statistical purposes. I mentioned above the suggestion previously made, that we should standardize on a 6600 hour year, I did not however mention the fact, that in my address I suggested the industry should adopt the policy of "No Sunday work", and shut down the last two hours on Saturday for making the repairs usually carried out on Sunday. This would give five complete days of 24 hours and one eight hour tour on Saturday, or 128 hours in all, which would be 512 hours for each "four weekly period", or 6656 hours per annum (13 periods). I hardly think it necessary for us to consider the odd 56 hours when using this number of hours as a divisor for distributing our fixed overhead costs, and that we could very well use 6600 hours for this purpose, particularly as no allowance has been made for legal holidays or forced shut-downs for any cause whatsoever.

Perhaps some of you will receive these suggestions with some doubt, but I would like to point out, that this is an age of standardization, and if we standardize on these principles or policies the closer together we shall get in arriving at accurate costs. I realize perfectly well, that these are suggestions that would have to be passed on by your executives, before you could put them into practice. May I make the suggestion that you discuss the idea with them, for I would like to see this subject brought out in the various Trade Associations, with the hope that possibly they would pass resolutions putting them into effect. It certainly would be beneficial for our industry, and it seems to me only reasonable to suggest that an industry which runs for 24 hours continually, should be in a position to have one complete day of rest, and I believe that there would be no great objection to it, if everybody would agree to adopt this policy of "no Sunday work". As our friend Einstein says, "Its all a question of relativity", and if everybody is doing the same thing, nobody will object. Sixteen hours, which is the number of hours I suggest should be cut off the working week of 144 hours, is approximately 11 per cent. Since we have a surplus productive capacity of more than 20 per cent in every grade in the industry, we shall still have a surplus productive capacity on this basis of approximately 10 per cent or more, which is what every healthy industry requires, to allow for the annual increase which normally takes place in the use of its product, and to permit a healthy competitive condition. We are therefore at present, in a sound condition to adopt a policy which would have a good effect on our labor turnover conditions, which at present are somewhat above the average for labor in this country.

Turnovers

In considering time as a cost factor, we might very well give some consideration to the various turnovers. Take for instance the question of the relation of sales to net worth. I think it is a fair statement to make, that as a rule our annual net sales run from 100 per cent to 150 per cent of our net worth. Time, is therefore, an important factor in this turnover, if we are to makt a fair profit on our investment. Apparently it is not possible to improve the turnover by increasing sales, except at an exorbitant selling expense, which more than offsets any gains in production costs. The improvement must come then by decreasing the size of our inventories, so that our inventory turnovers may become more rapid. Another point to be considered in this connection is, of course, the fact that large inventories undoubtedly have a depressing effect on prices. They are usually caused by a desire to keep the mill running at a time when business is slack, for undoubtedly it is an expensive matter to shut a mill down completely. However, a good deal can be done by budgeting production in accordance with estimated demand, so that while inventories are built up in slack times, they are depleted during busy times. In other words, production is so arranged, that by working on a certain prearranged percentage, the mill is ready at all times to meet sales requirements, but is never largely over-stocked. Seasonal variations of course, enter into these calculations, and it is only by constant effort that such a program can be satisfactorily carried out.

Cash Discounts

While I am talking of sales, I would like to bring up again a topic which we have previously discussed, namely, the "Cash Discounts" allowed our customers, and which undoubtedly play an important part as a cost factor in our industry, and are related to time. It is certainly difficult to explain why some grades should allow 3 per cent 10 days net 30, while others allow 2 per cent and 1 per cent. The last named, namely 1 per cent 10 days net 30, representing as it does a rate of 18 per cent per annum, would appear to be a very reasonable allowance for this purpose, and personally I would like to see an effort made to bring about the adoption of this rate as a universal practice in the industry. 3 per cent 10 days net 30 represents a rate of 54 per cent per annum, on the basis that by paying 20 days before payment must be made, 3 per cent may be deducted from the invoice; 20 days is an 18th part of 360 days, and multiplying 3 per cent by 18 you arrive at a rate of 54 per cent. Of course, in this connection there is a point to be considered that perhaps some of our customers do not pay at the end of 30 days. If this is at all general, you could not state that the rate we are allowing is 54 per cent per annum, and this brings up another point which might be of interest, namely, that I do not believe there are any great number of mills in our industry that make it a practice to put on their invoices a state-

ment to the effect, that interest at 6 per cent per annuam will be added to all invoices not paid within thirty days from date. I think this is a fair practice, which might be universally adopted.

Standard Costs

Without trespassing on Mr. Davy's territory I want to say a few words about "standard costs", merely as an endorsement of the importance of the subject on which he is to speak tomorrow. I am heartily in favor of time studies, but I am just as certain that unless these studies are undertaken by a trained man, and with the cooperation of the personnel, they are just as likely to do more harm than good. With our large investments in machinery and equipment, it is essential that the best possible use shall be made of every hour. In this connection, have you ever thought of making up a calendar on the following basis? Suppose your sales last year were a million dollars, and that you made a net profit of $100,000, and that you ran 6600 hours, and worked on a 13 four weekly period basis; supposing we put everything on a time basis and figure our cost and expenses were as follows:

1—Manufacturing Materials and Supplies	$510.000
2—Manufacturing Wages and Salaries	130,000
3—Insurance, Depreciation and other General Expenses	52,000
4—Office and Administrative Expense	42,000
5—Power Materials and Supplies	48,000
6—Selling Expenses Including Advertising	38,000
7—Repair Materials and Supplies	28,000
8—Purchased Power	16,000
9—Power Plant Service, Wages and Salaries	14,000
10—Repair Wages and Salaries	12,000
11—State and Local Taxes	10,000
	$900.000

Now if during that 6600 hours we produced goods which sold for a million dollars, how long were we working to make our expenses?

Assuming we had all our materials and supplies on hand at the beginning of the year, we worked from January 1st to "Sol" 17th to recover amount spent for manufacturing materials and supplies. "Sol" by the way is one suggested name for the extra month which under the International Fixed Calendar plan will be inserted between June and July. Thus we shall work for 6½ months (of 28 days each) to recover the amount paid out for these necessitites. Putting it that way does make one realize what an important item these materials and supplis are; it focusses attention on the necessity for conserving them; it brings out the value of the work Mr. C. M. Baker is doing in geting at the facts relating to "white water wastes" or in fact, all wastes in their use.

Perhaps, I should explain here that these figures are based on actual average percentages collected for the first half of 1928. I have not picked them out of the air. Some mills' percentages are below 50 per cent of the total cost for raw materials and supplies, but very few, and I believe you'll find if you later check up on these figures, they will not be far different from your own. Thus after working a little over 6½ of our 13 four week periods we have got back in our Treasury the amount we expended for raw materials and supplies for the year's operations. After working on to August 9th another six weeks and 90 hours we have received sufficient to pay our manufacturing wages and salaries for the year. Those are the two outstanding large items and probably the two in which there are the greatest possibilities for savings. For our other costs and expenses we work as follows:

Item	From	To
Insurance, Depreciation and General Expenses	August 10th	August 27th
Office and Administrative Expenses	August 28th	September 16th
Power Plant Materials and Supplies	September 17th	October 5th
Selling Expenses (including advertising)	October 6th	October 18th
Repair Materials and Supplies	October 19th	October 28th
Purchased Power	November 1st	November 6th
Power Plant Wages and Salaries	November 7th	November 12th
Repair Wages and Salaries	November 13th	November 17th
State and Local Taxes	November 18th	November 20th
Net Profit	November 21st	December 28th

In other words, after running our Plant continuously from Jan. 1st to Nov. 20th, we have received enough from Sales to take care of all our costs and expenses for the year. Anything we take in after that is Net Profit—that is assuming we make ten per cent which a large porportion of the mills don't do. When you get down to 6 per cent or 7 per cent *net profit*, you break into December before you start working for the year's profit.

It may be of interest to say that in figuring the above, I have assumed as stated above, that sales were $1,000,000 on which a profit of 10 per cent was made, and that the paper produced during the year of 6600 hours was just sufficient for these sales. Thus, every hour's production sold for approximately $151.50.

The chief point I want to bring out is the evident necessity for careful use of our raw materials and supplies, for we have to work for half the year to get sufficient funds to pay for what we shall consume during the year. Any savings we can make will put back the date when we can start working for the year's profit. To me it seems only reasonable, that we should be able to devote the last eight weeks of the year to this purpose, so that our net return will be from 12 per cent to 15 per cent per annum.

Before closing I want to refer to the report recently published by the Committee on Recent Economic Changes. The report had not been published when I chose the topic of this address, but it bears on this topic because it stresses the fact that "Acceleration rather than structural change is the key to an understanding of our recent (1922-1929) economic developments."

The report goes on to say, that "Gradually the fact emerged, during the course of this survey that the distinctive character of these years owes less to fundamental change than to intensified activity." Thus it is plain that not only in our industry but in all industries, "time" as a cost factor is becoming increasingly important—not that we work longer—we don't, rather the opposite is the fact, but because every hour, we accomplish more, produce more. As the Committee adds "The changes have not been in structure but in *speed* and spread."

According to the report the use of power has increased 3¼ times faster than the growth of population, and as we know, this is one of the primary causes of the increased production per man hour.

There has also been an increase in the velocity of the turnover of credit, according to the report, due to improved transportation and communication, *scientific control of inventories*, the continuation of the simplification movement and our accelerated turnover of commodities. Business has thus developed a new degree of economy in the use of credit, which may be set down as another characteristic of the period.

Price relationships, Wages and Cost of Living are dealt with in Section 2 and the committee says that in this field is to be found, one of "the striking and significant developments" of the period. They contrast it with the period between 1896 and 1913, when the wholesale price level rose 2.3 per cent annually, with wages rising a very little more than this, so that their purchasing power increased only ½ per cent per annum. In the period 1922-1927, these same wholesale prices declined about .1 per cent each year while the purchasing power of wages rose 2.1 per cent each year. The increase in per capita productivity in manufacturing from 1922 to 1927 was 35 per cent.

Economic reorganization, the co-operation of business leaders, economic experts and the Government, the general spread of information, the growth of trade associations, the co-operation of labor to increase productivity are all mentioned as influences at work, to weld us together in a new solidarity of thought and action, and as having a broadening influence on the minds of our leaders to whose influence we must look for the maintenance of our "economic balance". The concluding part of the report deals almost entirely with the importance of maintaining this "economic equilibrium" in all things, such as the balancing of consumption and production and says that *"Increasing skill and scientific data have made the anticipation of demand far more accurate"*. Nobody after reading the report will doubt the value of basing their business on budgets set up after a scientific survey of the sales possibilities.

The Five Day Week in American Industry*

The Industrial Relations Division of the National Industrial Conference Board made a study recently, on this subject. H. F. Brown Manager of this division, in reporting on this study said it was undertaken in order to assemble all available information tending to show the extent of the movement, the reasons for its adoption, the industries which are operating on such a basis and the technique of its administration.

270 Plants on Five Day Schedule

There are 270 establishments including the Ford Company, employing over 200,000 men and women, operating on a regular five day schedule, although the number of hours worked differs from plant to plant. This number does not include concerns operating under the five day week schedule, during the summer months only, or any special cases, on account of business depression.

It was found that the reasons for the adoption of the five day week, varied from the desire of the Hebrew race for time to observe the Sabbath on Saturday, to the economic desire for curing over-production.

The majority of plants investigated were found in comparatively few industries, foremost of which were the highly unionized garment industries which made up sixty per cent of the total. Other industries in which the shorter week schedule was found to be operating are printing and publishing, metal and mechanical industries, textile, and paper and paper products industries. Twelve per cent of the companies reporting made no change in their total weekly hours by changing from the six or five and a half to the five-day week. Frequently, however, compliance with the law necessitated a reduction of weekly hours, especially for women workers in states where their hours were regulated by legislation, as in New York State. If total hours were not changed the question of adjustment of wage rates did not rise. In respect to wage adjustment in plants in which the total number of weekly hours had been reduced, there seemed to be no prevailing practice, and the system of wage payment had a determining influence upon the policy adopted. Usually, time workers rather than piece workers received the increase in wage rates in such cases.

General Adaptability Not Yet Known

It was found that, where the total working hours per week had been reduced in the change to the five-day week schedule, about twenty-five per cent of the reporting companies noted a proportionate decline in production, about fifty per cent believed there had been no change in the productive output, and about twenty-five per cent thought production had somewhat increased. Where weekly hours remained unchanged, over fifty per cent of the reporting companies found production unchanged, a few reported a production loss, and over forty per cent noted an increase in output.

The general adaptability of the five-day week schedule in industry is not yet proven. Where it has been enforced by organized labor it is generally reported to be unsatisfactory from a production standpoint. Where it has resulted from a voluntary joint agreement of management and workers it has for the most part proven satisfactory to both. Certain operation economies have no doubt been realized by the shorter work week as, for instance, where the plant generates its own power, and the shorter week schedule has generally proved popular with the working force, especially where reduction in wage rates and wage earnings has not resulted from the change.

Impracticable in Steel

Severn P. Ker, President, Sharon Steel Hoop Company, stated that in the steel industry where continuous processes are necessary, the five-day week schedule would be impracticable and would greatly increase the cost of production, since certain conditions in gas mains and pumping stations and heat in furnaces must be maintained during idle hours. He questioned from a social standpoint and from the view of adequate economic progress in the interest of all concerned, the advisability of introducing two idle days into the week.

Now Argued from Philosophic Basis

Charles Cheney pointed out that while the five-day week is an interesting experiment, it is also one that must be approached and watched with great care. He emphasized the contention by Mr. Browne that where the shorter week has been introduced by compulsion of labor unions unsatisfactory results had usually ensued, whereas the opposite was true when the arrangement rested on a voluntarily mutual basis. Whereas, heretofore propaganda for the shorter work week schedule has customarily been predicated upon the necessity of the worker's health, the need for greater period of recreation, and on similar grounds, it is now argued from the philosophic basis, especially by labor unions, that a restriction of output by the individual worker will create work for more persons to perform. Opposed to this is the doctrine that unrestricted output of the individual increases the share which capital, management and labor will be able to claim. This is the American mass production plan to which American industry is now geared. Mr. Cheney warned against generalizing at this time from the as yet meager results available from the small group of industrial plants operating on a five-day week schedule. Certain social and economic advantages seem to be offset by social and economic disadvantages. The expense connected with starting and stopping of machinery and with heating of workshops is in a sense a wasteful expense which is just as large for a short as for a longer work week, but in the former case constitutes a larger burden on production than in the latter case. This disadvantage might be eliminated by arranging the shorter week schedule so as to maintain total weekly work hours.

Experiments During Summer

Morris E. Leeds, president, The Leeds & Northrup Company, called attention to the experiments with the five-day week made during summertime, as the result of which, some concerns have extended the shorter week schedule all year round.

J. M. Larkin and William B. Foster, managers of industrial relations departments, of Bethlehem Steel Company and E. I. du Pont de Nemours & Co., respectively, urged a differentiation between continuous process industries and those which cease operation during every week-end, in judging the advantages and advisability of a shorter work week.

J. Taber Loree, vice president of the Delaware and Hudson Company, called attention to the sliding scale of weekly work hours in effect in the shops of the railroad under his management. Depending upon the amount of production required, the weekly work schedule is automatically adjusted between forty and sixty hours of work, with a forty-eight hour week as the general standard aimed at.

Five Days for Workers Six Days for Plant

In closing the discussion, M. W. Alexander explained how the Ford Company combines the five-day week schedule for the workers with a six-day work schedule for the plant, by employing an extra force, said to amount to about thirty thousand persons, to work rotatingly during the days on which a part of the regular force is absent. Correspondingly, the regular force is divided into groups, each of which drops out of work during a different day of the week. Mr. Alexander urged that the experiment with the five-day week be carefully watched and studied, in order that the value of its social and economic advantages and disadvantages may be clearly ascertained as a sound basis for future determination as to the best work schedule for various branches of industry and trade under various circumstances and conditions.

* National Conference Board Bulletin.

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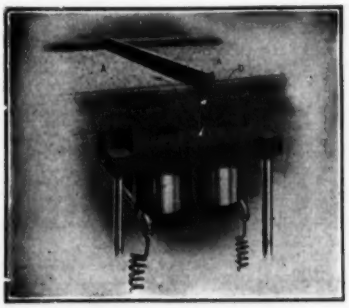

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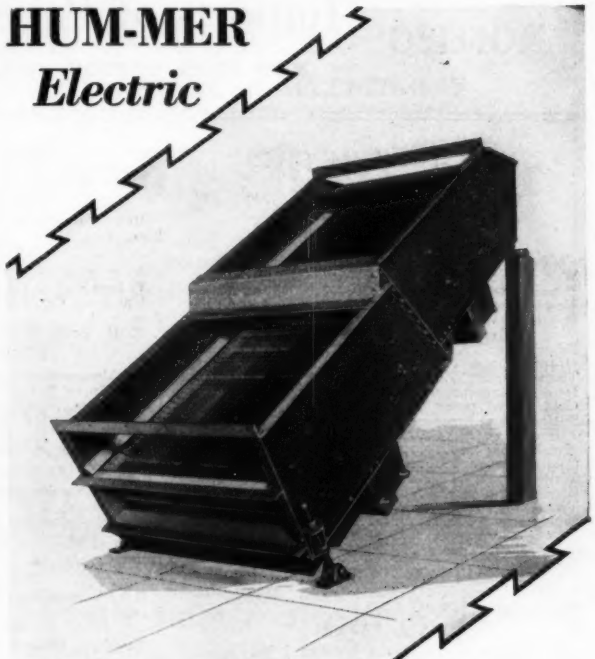

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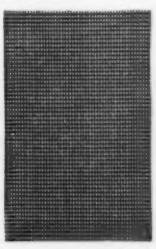

TYLER FOURDRINIER CYLINDER CORDUROY WIRES

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING JULY 20, 1929

SUMMARY

Cigarette paper .....128 cs.
Wall paper .....15 bls., 16 cs.
Paper hangings .....10 bls., 12 cs.
News print .....1,101 rolls
Printing paper .....59 rolls, 23 cs.
Wrapping paper .....18 cs.
Filter paper .....49 bls., 157 cs.
Drawing paper .....6 rolls, 41 cs.
Tissue paper .....66 cs.
Decalcomania paper .....10 cs.
Gold coated paper .....4 cs.
Surface coated paper .....59 cs.
Photo paper .....2 cs.
Metal paper .....1 cs.
Colored paper .....24 cs.
Writing paper .....14 cs.
Condenser paper .....11 cs.
Transparent greaseproof paper .....117 cs.
Fancy paper .....1 cs.
Raw paper .....90 cs.
Miscellaneous paper .....81 bls., 185 cs.

CIGARETTE PAPER

British American Tobacco Co., Mauretania, Southampton, 128 cs.

WALL PAPER

F. J. Emmerich, Caronia, London, 1 ble.
G. J. Hunken, Stuttgart, Bremen, 1 ble.
Phoenix Shipping Co., A. Ballin, Hamburg, 4 bls.
Bendix Paper Co., A. Ballin, Hamburg, 7 bls.
National City Bank, A. Ballin, Hamburg, 2 bls.
Guaranty Trust Co., A. Ballin, Hamburg, 13 cs.
R. F. Downing & Co., Olympic, Southampton, 3 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., Cedric, Liverpool, 3 cs., 10 bls.
F. L. Kramer & Co., Mauretania, Southampton, 5 cs.
Whiting & Patterson Co., Inc., Mauretania, Southampton, 4 cs.

NEWS PRINT

Stora Kopperberg Corp., Gripsholm, Gothenburg, 78 rolls.
Parsons & Whittemore, Inc., Stuttgart, Bremen, 477 rolls.
Perkins Goodwin & Co., A. Ballin, Hamburg, 478 rolls.
F. Henjes, Jr., A. Ballin, Hamburg, 68 rolls.

PRINTING PAPER

P. C. Zuhlke, Pennland, Antwerp, 14 cs.
P. Puttmann, Pennland, Antwerp, 4 cs.
Keuffel & Esser Co., Pennland, Antwerp, 59 rolls.
Oxford University Press, Cedric, Liverpool, 5 cs.

WRAPPING PAPER

H. Reeve Angel & Co., Inc., Pennland, Antwerp, 7 cs.
E. Dietzgen & Co., A. Ballin, Hamburg, 11 cs.

FILTER PAPER

American Express Co., Caronia, London, 2 cs.
H. Reeve Angel & Co., Inc., Minnetonka, London, 17 cs.
H. Reeve Angel & Co., Inc., Olympic, Southampton, 49 bls., 11 cs.
E. Fougera & Co., Olympic, Southampton, 127 cs.

DRAWING PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 1 cs.
D. C. Andrews & Co., Pennland, Antwerp, 14 cs.
Keuffel & Esser Co., A. Ballin, Hamburg, 26 cs., 6 rolls.

TISSUE PAPER

G. W. Sheldon & Co., Minnetonka, London, 3cs.
Old Master Paper & Pulp Co., A. Ballin, Hamburg, 60 cs.
W. J. Byrnes & Co., Mauretania, Southampton, 3 cs.

DECALCOMANIA PAPER

B. F. Drakenfeld & Co., Samaria, Liverpool, 10 cs. (duplex).

GOLD COATED PAPER

F. Murray Hill Co., Stuttgart, Bremen, 4 cs.

SURFACE COATED PAPER

P. C. Zuhlke, Pennland, Antwerp, 59 cs.

PHOTO PAPER

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Hensel, Bruckman & Lorbacher, A. Ballin, Hamburg, 1 cs.

COLORED PAPER

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J. Beckhard & Co., Stuttgart, Bremen, 1 cs.
Universal Car Loading Co., Stuttgart, Bremen, 8 cs.
P. H. Petry & Co., A. Ballin, Hamburg, 5 cs.

WRITING PAPER

B. Altman & Co., Rochambeau, Havre, 3 cs.
B. Altman & Co., Olympic, Southampton, 4 cs.
American Express Co., France, Havre, 1 cs.
M. J. Corbett & Co., Mauretania, Southampton, 2 cs.
Stern Bros., Mauretania, Southampton, 4 cs.

CONDENSER PAPER

F. B. Vandegrift & Co., Samaria, Liverpool, 11 cs.

TRANSPARENT GREASEPROOF PAPER

Central Hanover Bank & Trust Co., A. Ballin, Hamburg, 117 cs.

FANCY PAPER

Hensel, Bruckman & Lorbacher, France, Havre, 1 cs.

RAW PAPER

American Express Co., A. Ballin, Hamburg, 90 cs.

MISCELLANEOUS PAPER

Japan Paper Co., Gripsholm, Gothenburg, 1 cs.
C. K. MacAlpine & Co., Gripsholm, Gothenburg, 81 bls.
E. H. Sargent & Co., Gripsholm, Gothenburg, 5 cs.
Standard Products Corp., Rochambeau, Havre, 36 cs.
Rohner Gehrig & Co., A. Ballin, Hamburg, 4 cs.
Keller Dorian Paper Co., France, Havre, 8 cs.
W. L. Newberry, France, Havre, 7 cs.
I. Cornet, France, Havre, 3 cs.
Coenca Morrison Co., France, Havre, 1 cs.
Houbigant, Inc., France, Havre, 6 cs.
Standard Products Corp., France, Havre, 114 cs.

RAGS, BAGGINGS, ETC.

French American Banking Corp., Austvard, Leghorn, 141 bls. rags.
Castle & Overton, Inc., Stuttgart, Bremen, 21 bls. rags.
Equitable Trust Co., Stuttgart, Bremen, 44 bls. rags.
A. W. Fenton, Inc., A. Ballin, Hamburg, 127 bls. rags.
1st National Bank of Boston, Exiria, Barcelona, 88 bls. cotton waste.
W. Schall & Co., Exiria, Valencia, 117 bls. jute waste.
Equitable Trust Co., Karlsruhe, Bremen, 45 bls. rags.
Equitable Trust Co., Cedric, Liverpool, 35 bls. rags.
S. Birkenstein & Sons, Cabo Santa Maria, Seville, 178 bls. rags.
Manufacturers Trust Co., Artigas, Manchester, 18 bls. rags.
Equitable Trust Co., Artigas, Manchester, 14 bls. rags.
E. Butterworth & Co., Inc., Artigas, Manchester, 133 bls. rags.
Castle & Overton, Inc., Artigas, Manchester, 46 bls. bagging.
Castle & Overton, Inc., Artigas, Manchester, 2 bls. rags.
Darmstadt, Scott & Courtney, Artigas, Manchester, 17 bls. paper stock.
J. Cohen Son & Co., Indep. Hall, Havre, 49 bls. rags.
V. Galaup, Indep. Hall, Havre, 296 bls. rags.
Katzenstein & Keene, Inc., Indep. Hall, Dunkirk, 63 bls. rags.
Katzenstein & Keene, Inc., Indep. Hall, Dunkirk, 95 bls. bagging.
C. B. Richard & Co., M. Ossero, Catania, 200 bls. bagging.
E. J. Keller Co., Inc., Lucia, ——, 33 bls. rags.
Castle & Overton, Inc., G. Washington, Bremen, 61 bls. bagging.

OLD ROPE

W. Schall & Co., Austvard, Leghorn, 121 coils.
W. Schall & Co., Austvard, Naples, 78 rolls.
Brown Bros. & Co., United States, Copenhagen, 333 coils.
J. C. Van Hallie, Pennland, Antwerp, 24 coils.
Brown Bros. & Co., A. Ballin, Hamburg, 12 bls.
Brown Bros. & Co., Karlsruhe, Bremen, 98 bls.
International Purchasing Co., Bergensfjord, Oslo, 67 coils, 3 bls.
International Purchasing Co., Excelsior, Marseilles, 131 coils.
E. J. Keller Co., Inc., N. Amsterdam. ——, 67 coils.

CASEIN

Atterbury Bros., Inc., Rochambeau, Havre, 262 bags.
——, Bernini, Buenos Aires, 314 bags.

WOOD PULP

Bulkley, Dunton & Co., Aggersund, ——, 10,700 bls. wood pulp, 1,985 tons.
J. Andersen & Co., Aggersund, Hernosand, 4,400 bls. sulphite, 900 tons.
J. Andersen & Co., Aggersund, Hernosand, 3,750 bls. sulphate, 750 tons.
Price & Pierce, Ltd., Aggersund, Soderham, 750 bls. sulphite, 125 tons.
Bulkley, Dunton & Co., Gripsholm, ——, 150 bls. wood pulp.
E. M. Sergeant & Co., Gripsholm, Gothenburg, 200 bls. sulphite.
Price & Pierce, Ltd., Gripsholm, Gothenburg, 250 bls. wood pulp.
——, Karlsruhe, Bremen, 155 bls. wood pulp.
E. M. Sergeant & Co., Bergensfjord, Oslo, 150 bls. wood pulp.
Atterbury Bros., Inc., Bergensfjord, Oslo, 500 bls. wood pulp.
——, Bergensfjord, Oslo, 800 bls. sulphite.
Castle & Overton, Inc., Westphalia, Hamburg, 1,990 bls. wood pulp, 298 tons.
A. P. W. Paper Co., Dagali, Sheet Harbor, 12,287 bls. wood pulp.
A. P. W. Paper Co. (Albany, N. Y.), Dagali, Sheet Harbor, 10,755 bls. wood pulp.

WOOD FLOUR

The Burnet Co., Gripsholm, Gothenburg, 291 bags.

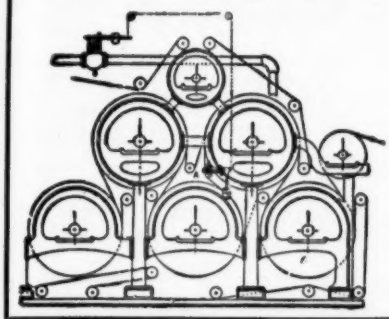
PHILADELPHIA IMPORTS

WEEK ENDING JULY 20, 1929

National City Bank, Austvard, Genoa, 146 bls. rags.
French American Banking Corp., Austvard, Genoa, 42 bls. rags.
——, Austvard, Leghorn, 120 bls. rags.
French American Banking Corp., Austvard, Leghorn, 39 bls. rags.
National City Bank, Austvard, Leghorn, 296 bls. rags.
S. E. Ingber, Cabo Santa Maria, Seville, 73 bls. rags.
Castle & Overton, Inc., Cabo Santa Maria, Bilbao, 53 bls. rags.
Congoleum Nairn Co., Excelsior, Genoa, 48 bls. rags.
S. Birkenstein & Sons, Excelsior, Marseilles, 56 rolls old rope.
D. I. Murphy, Excelsior, Marseilles, 66 bls. rags.
Castle & Overton, Inc., Excelsior, Marseilles, 123 bls. rags.
Katzenstein & Keene, Inc., Excelsior, Marseilles, 525 bls. rags.
V. Galaup, Excelsior, Marseilles, 54 bls. rags.
Banco Com'l Italiane Trust Co., M. Ossero, Catania, 74 bls. rags.
——, M. Ossero, Catania, 602 bls. rags.
Castle & Overton, Inc., Wytheville, Rotterdam, 118 bls. rags.
Castle & Overton, Inc., Exantnia, Greece, 78 bls. bagging.
Castle & Overton, Inc., Estrella, Spain, 344 bls. rags.
Castle & Overton, Inc., Sacandaga, Antwerp, 722 bls. rags.
Castle & Overton, Inc., London Corp., London, 40 bls. rags.
Castle & Overton, Inc., London Corp., London, 4 bls. old rope.
Castle & Overton, Inc., City of Alton, Holland, 109 bls. rags.
Castle & Overton, Inc., Seattle Spirit, Germany, 351 bls. rags.
Castle & Overton, Inc., Binnendyk, Holland, 170 bls. wood pulp.
E. J. Keller Co., Inc., Hannover, ——, 18 bls. rags.
E. J. Keller Co., Inc., Livenza, ——, 183 bls. rags.

(Continued on page 68)

The Pickles Drying Regulator



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Imports of Paper and Paper Stock

(*Continued from page 66*)

E. J. Keller Co., Inc., West Eldara, ——, 88 bls. rags.
E. J. Keller Co., Inc., Hagen, ——, 351 bls. wood pulp.
E. J. Keller Co., Inc., Exton, ——, 163 bls. rags.
E. J. Keller Co., Inc., Wytheville, ——, 75 bls. rags.
E. J. Keller Co., Inc., London Corp., ——, 50 bls. rags.

NORFOLK IMPORTS

WEEK ENDING JULY 20, 1929

Atlantic Jute Mills, Artigas, Manchester, 80 bls. bagging.
N. Y. Trust Co., Artigas, Manchester, 71 bls. bagging.

BALTIMORE IMPORTS

WEEK ENDING JULY 20, 1929

Congoleum Nairn Co., Indep. Hall, Havre, 292 bls. rags.
Congoleum Nairn Co., Indep. Hall, Dunkirk, 171 bls. rags.
Congoleum Nairn Co., Indep. Hall, Dunkirk, 45 bls. bagging.
S. Shapira & Son, Indep. Hall, Dunkirk, 46 bls. rags.
E. J. Keller Co., Inc., Hagen, ——, 348 bls. wood pulp.
Castle & Overton, Inc., Beemsterdyk, Holland, 480 bls. wood pulp.
Castle & Overton, Inc., Braheholm, Sweden, 300 bls. wood pulp.
Castle & Overton, Inc., Wytheville, Holland, 1,330 bls. wood pulp.

BOSTON IMPORTS

WEEK ENDING JULY 20, 1929

Castle & Overton, Inc., Paraguay, Germany, 1,956 bls. wood pulp.
Castle & Overton, Inc., Binnendyk, Holland, 484 bls. wood pulp.

NEWPORT NEWS IMPORTS

WEEK ENDING JULY 20, 1929

Castle & Overton, Inc., Wytheville, Holland, 170 bls. wood pulp.

CHARLESTON IMPORTS

WEEK ENDING JULY 20, 1929

Castle & Overton, Inc., Missouri, Japan, 419 bls. bagging.

Publishers Concerned At News Print Future

CHEVENNE, Wyo.,—The concern of all publishers in the investigation now being conducted by the Federal Trade Commission to determine whether practices of manufacturers and distributors of news print paper tend to create a monopoly is mainly with the future supply of news print, the legislative committee of the National Editorial Association stated in its annual report submitted at yesterday's session of the association's convention here.

The committee reported that there has been no complaint that the news print prices prevailing in recent months are excessive.

"There are probably some instances where smaller consumers are obliged to pay prices disproportionate to their competitors, but it was not these deifferentials, fair or otherwise, that aroused the entire publishing industry, the committee reported in stressing the concern over the future supply.

The smaller newspapers, the committee stated, have reason to be alarmed over the high price trend, as the future, both near and distant, holds ominous signs.

In an extended consideration of the government envelope printing business the committee called attention to the fact that the International Envelope Company, a subsidiary of the International Paper and Power Company, is the present government contractor. In commenting on this connection the legislative committee said:

"Industry demands editorial support for the principle that the government has no right to compete with private industry, but deliberately ignores the application of this principle of the printing industry."

Officers of the association indicated Atlanta, Ga., Boston or Milwaukee will be chosen for the 1930 meeting of the organiaztion. An invitation to meet in Alaska next year was received this afternoon from the Governor of Alaska.

Wood Pulp from Norway Arrives at Albany

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., July 22, 1929.—The Norwegian ocean steamer "Dagali" docked at the port terminal here last week carrying 1,100 tons of wood pulp for the A. P. W. Paper Company and an injured captain who refused to leave the bridge of his ship, although suffering considerable pain from a twisted ligament. The shipment was one of the largest shipped from Nova Scotia over the water route this summer and a number of similar ones will follow before the season officially comes to a close.

Enroute to Albany the big ocean liner stopped at New York where 1,600 tons of pulp were transferred to barges for shipment through the barge canal. Donald G. Kibbey, traffic manager of the company, said this barge cargo had to be unloaded where canal vessels were available. The Dagali is the sixth of the A. P. W. Company's chartered fleet to arrive in this city during the past few months.

Great Atlantic Paper Co. Reorganized

The Great Atlantic Paper Company, Inc., 77 Wooster street, New York City, has recently been reorganized under Jack Galewitz, who is now president of the new corporation.

Mr. Galewitz, in anticipation of a large fall business, has just completed taking into their stock, and stored in various warehouses in the City, a shipment comprising of more than 75 carloads of various grades of printing papers for sale to the jobbing trade.

The policy of the Great Atlantic Paper Company, Inc., is to carry a complete stock in the following grades for the jobbers so as to be able to fill their immediate requirements from stock:

News Print Paper, rolls and sheets, No. 1 M. F., Super, Antique and Atlantic Book; No. 1 and No. 2 Colored Bristols, No. 1 and No. 2 Manila Tag, No. 1 White Plain Bond, White Lake Bond, White Lee Bond, Presto Bond (Colors only) Ocean View Bond and Cracker Jack Bond (Watermarked), Flat XXX Manila and Railroad Writing.

Henle Wax Paper Mfg. Co. To Expand

Owing to increased demands for their products the Henle Wax Paper Manufacturing Company, Inc., has found it necessary to enlarge its facilities and accordingly has acquired a new building located at 1428-34 Longfellow avenue, Bronx, New York, where it will be established about September 1, 1929.

The new plant consists of a two-story and basement modern fire-proof constructed building on a plot 100 x 135 with adjoining garage. Additional modern equipment will also be installed which will double the present capacity.

This company has a record of over 25 years experience in the manufacture of wax paper of every description, also various paper specialties particularly for the confectionery trade. It is also a large producer of bread wraps and waxed glassine cake wrappers for the baking trade. A complete printing department is operated in connection with its waxing plant.

John Murray Goes With Racquette River

[FROM OUR REGULAR CORRESPONDENT]

POTSDAM, N. Y., July 22, 1929.—Announcement is made of the appointment of John Murray to the position as assistant manager of the Racquette River Paper Company. He is regarded as an expert in duties pertaining to the making of high grade fancy stationery and other fine paper products and he will direct activities in the production department. He was formerly employed with the Hollingsworth & Whitney Company at Waterville, Maine, as division superintendent. Before coming to this country several years ago he was identified with the manufacture of paper while in the employ of a large firm in Scotland.

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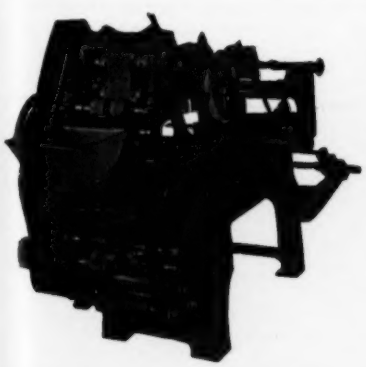

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Get My Quotations Before Placing Your Orders
Special Machinery Designed and Built

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1702 Robinson St., South Bend, Ind.

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, July 24, 1929.

Conditions in the local paper market are satisfactory for the time of year. Demand for the various standard grades of paper is well up to average for midsummer. Prices are generally holding to schedule. Sales forces of the leading paper houses are looking forward to the coming autumn campaign with confidence.

Now that the holidays in the United States and Canada are over, production of news print is being resumed at around 85 per cent of capacity. Shipments are correspondingly heavy. Stocks in hand at the mills are not excessive and the news print market is considered in a sound position. Quotations are steady and unchanged.

Production of paper board has been curtailed in many of the mills. Offerings are large enough to take care of immediate requirements. There have been no further price changes. The fine paper market continues to exhibit a strong undertone. Some improvement was noticed in the coarse paper market. Wrapping paper is moving in excellent volume.

Mechanical Pulp

Most of the business transacted in the ground wood market was along routine lines. Demand for both domestic and imported mechanical pulp is seasonal. Production abroad has been materially curtailed and offerings are not excessive. Prices of the various grades are holding to previously recorded levels and shading is infrequent.

Chemical Pulp

Steadiness continues to prevail in the chemical pulp market. The best grades of imported unbleached sulphite are practically sold out for the current year and a large tonnage has already been sold for 1930. Although bleached sulphite is showing some signs of weakness, prices are being maintained at recently quoted levels, in most instances. The Swedish kraft pulp mills are also practically sold up for this year, while 15 per cent of the estimated production for 1930 has been booked.

Old Rope and Bagging

The old rope market continues to display strength. Both domestic and imported manila rope are in excellent request and the recently advanced prices are holding fairly well. Mixed strings are going forward at a normal pace. The bagging market is practically unchanged, although gunny and roofing bagging are in better demand.

Rags

Now that the inventory period is over, more interest is being evinced by the paper mills in the domestic rag market. Demand for new cuttings is moderately active. Roofing rags are rather easy at present. Mixed rags are moving in fair volume. The foreign rag market continues quiet, with prices unaltered.

Waste Paper

The paper stock market is very dull at present, although there is a fair demand for mixed paper and news from the board mills. Book stock is easier. Overissue magazine is now selling at from 1.50 to 1.60 and solid flat book at from 1.40 to 1.50. Crumpled No. 1 is offered at from 1.00 to 1.10. Soft white shavings are holding to schedule.

Twine

Trading in the local twine market during the past week was mostly seasonal. No radical price changes have been recorded for some time past. With wrapping paper continuing to move in good volume, the future outlook for the twine market is promising and the industry is considered in good shape for expansion in the fall.

Macdonald Returns from Pacific Coast

R. G. Macdonald, secretary of the Technical Associaton of the Pulp and Paper Industry returned this week from a visit to the mills and members of TAPPI on the west coast. In the course of his travels Secretary Macdonald visited nearly all of the mills and assisted the members of the Technical Association in California, Oregon, Washington and British Columbia in organizing a Pacific Coast Section of TAPPI.

On June 22 about fifty local members met with the secretary at the New Washington Hotel in Seattle and proceeded to organize and elect Section officers. Prof. W. L. Beuschlein of the University of Washington acted as chairman of the meeting and the nominating committee recommended the following for election, this action being followed by their election: Chairman, C. R. P. Cash, superintendent of the soda pulp mill of the Cascade Paper Company, West Tacoma, Wash., Vice Chairman, R. N. DeCew of the Fibreboard Products Company of Summer, Wash. and Prof. H. K. Benson of the University of Washington was selected as Secretary. It was decided to hold the next meeting in Tacoma, Wash. in October at which time further organization of the Section will proceed.

Mr. Macdonald was much impressed with the remarkable development of the industry on the Coast and recommends to any person interested in the progress of pulp and paper making to visit this new country when the opportunity affords. It is evident that this growth is still very much in progress and that we will see an even larger group of mills built within the next few years.

Griffith-Hope Co. Expands

MILWAUKEE, Wis., July 22, 1929.—The Griffith-Hope Company, of West Ollis, the industrial suburb of Milwaukee, has recently added considerable equipment and facilities for the manufacture of dispensing cabinets and fixtures for the paper trade. The Griffith-Hope Company has for years manufactured many different types of dispensing cabinets and fixtures for towels, toilet and napkins, and their engineering staff and production facilities are always at the disposal of their customers. At the new plant in West Allis many different kinds of sheet metal are stamped and pressed into intricate shapes, to be sprayed with enamel or finished in beautiful nickel or chromium plate.

Parsons Paper Co. Puts Out New Paper

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., July 23, 1929.—The Parsons Paper Company is putting on the market a new grade of fine writing paper known as "L'Envoi." It is especially fitted for die stamping, lithograph or engraving.

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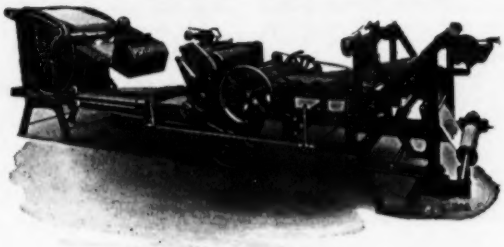

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Classified List of Pulp Mill Products
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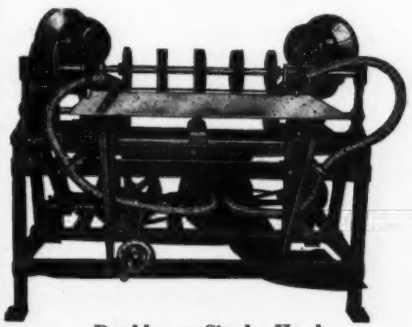

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Also builders of Envelope Machinery

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, July 24, 1929.

BLANC FIXE.—Trading in the blanc fixe market was moderately active. The contract movement is well up to average. Prices remain unchanged. The pulp is quoted at from $42.50 to $45.00 per ton, in bulk, while the powder is selling at from 3¾ cents to 4½ cents per pound, in barrels, at works.

BLEACHING POWDER.—The bleaching powder market was rather quiet during the past week. Shipments against contract are moving in fairly satisfactory volume. Prices are holding to previously quoted levels. Bleaching powder is selling at from $2.00 to $2.35 per 100 pounds, in large drums, at works.

CASEIN.—Easier conditions prevail in the casein market. Domestic casein is quoted at from 14½ cents to 15 cents per pound. Argentine standard ground is selling at from 15¼ cents to 15½ cents per pound, and finely ground at from 15¾ cents to 16 cents a pound, all in bags, car lot quantities.

CAUSTIC SODA.—The caustic soda market is in a sound position. Contract shipments are going forward in good volume. Prices are unchanged. Solid caustic soda is quoted at from $2.90 to $2.95, while the flake and the ground are selling at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—Steadiness prevails in the china clay market. Both imported and domestic grades are in fairly good request. Prices remain unaltered. Imported china clay is quoted at from $15 to $25 per ton, ship side, while domestic paper making clay is selling at from $8 to $15 per ton, at mine.

CHLORINE.—Supplies of chlorine are moving to the paper mills in excellent volume. Prices are holding to schedule, without difficulty. Chlorine is quoted at 3 cents per pound, in tanks, or multi-unit cars, at works, on standard contracts. The spot quotation ranges from 3¾ cents to 3½ cents per pound.

ROSIN.—The rosin market continues to show improvement and prices are firm. The grades of gum rosin used in the paper mills are now quoted at from $8.70 to $8.75 per 280 pounds, in barrels, on dock. Wood rosin is selling at from $6.75 to $7.80 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Offerings of salt cake are limited and the market is exhibiting a strong undertone. Recently advanced prices are being maintained, in most instances. Salt cake is quoted at from $17 to $21 per ton, while chrome salt cake is still selling at from $14 to $15 per ton, in bulk, at works.

SODA ASH.—Most of the business transacted in the soda ash market during the past week was along routine lines. Supplies are moving into consumption in a normal manner. Prices remain unchanged. Contract quotations on soda ash, in car lots, at works, are as follows: in bags, $1.32½; and in barrels, $1.55.

STARCH.—The starch market is practically unchanged. Paper mill demand is mostly seasonal and offerings are sufficient to take care of current requirements. Prices are generally holding to schedule. Special paper making starch is quoted at $3.82 per 100 pounds, in bags, and at $3.99, in barrels.

SULPHATE OF ALUMINA.—Demand for sulphate of alumina is fairly persistent. The contract movement is satisfactory. Prices remain unchanged. Commercial grades of sulphate of alumina are quoted at from $1.40 to $1.55, in bags, and iron free at from $1.90 to $2.05 per 100 pounds, in barrels, at works.

SULPHUR.—Conditions in the sulphur market are excellent for the time of year. Prices are steady. Sulphur is quoted at $18 per ton, in lots of 1,000 tons, or over, on yearly contracts, and at $20 per ton for any smaller quantity over that period. On spot and near by car loads, the quotation is $21 per ton.

TALC.—No radical changes were recorded in the talc market during the past week. Prices are generally holding to previously quoted levels. Domestic talc is selling at from $16 to $18 per ton, in bulk, at eastern mines, while imported talc is offered at from $18 to $20 per ton, in bags, ship side.

Market Quotations

Paper

Ledgers	11.00	@	38.00
Bonds	9.00	@	53.25
Writings—			
Extra Superfine	14.00	@	32.00
Superfine	14.00	@	32.00
Tub sized	10.00	@	15.00
Engine sized	8.00	@	11.00
Book, Cased—			
S. & S. C.	6.00	@	7.50
M. F.	5.75	@	7.00
Coated and Enamel	7.50	@	12.00
Lithograph	7.50	@	12.00
Tissues—Per Ream—			
White No. 1	.75	@	1.00
Anti-Tarnish	1.35	@	1.90
Colored	1.00	@	2.00
White No. 2	.75	@	.80
Kraft	1.00	@	1.10
Manila	.75	@	.80
Kraft—			
No. 1 Domestic	6.25	@	6.50
No. 2 Domestic	5.25	@	5.50
Southern	4.25	@	4.50
Imported	6.50	@	7.00
Manila—			
No. 1 Jute	9.00	@	9.25
No. 2 Jute	7.75	@	8.50
No. 1 Wood	4.75	@	5.25
No. 2 Wood	4.00	@	4.50
Butchers	3.75	@	4.25
Fibre Papers—			
No. 1 Fibre	5.00	@	5.50
No. 2 Fibre	4.75	@	5.25
Common Bogus	2.75	@	3.00
Screenings	3.00	@	3.25
Card Middles	4.00	@	5.00
Glassine—			
Bleached, basis 25 lbs.	13.00	@	16.00
Bleached, basis 20 lbs.	15.00	@	16.00

(Delivered New York)

News, per ton—			
Rolls, contract	62.00	@	—
Rolls, spot	62.00	@	—
Sheets	67.00	@	—
Side Runs	47.00	@	52.00
Boards—per ton—			
News	37.50	@	40.00
Straw	52.50	@	55.00
Chip	35.00	@	37.50
Binders' Boards	65.00	@	70.00
Sgl. Mla. Lt. Chip	47.50	@	50.00
Wood Pulp	80.00	@	85.00
65 Test Jute Liner	52.50	@	—
85 Test Jute Liner	55.00	@	—

Mechanical Pulp

(On Dock)

No. 1 Imported—			
Moist	28.00	@	31.25
Dry	32.00	@	34.00

(F. o. b. Mill)

No. 1 Domestic	26.00	@	29.00
Screenings	15.00	@	20.00

Chemical Pulp

(On Dock, Atlantic Ports)

Sulphite (Imported)—			
Bleached	3.75	@	4.40
Easy Bleaching	2.90	@	3.10
No. 1 strong unbleached	2.70	@	3.00
Mitscherlich unbleached	2.75	@	3.25
No. 2 strong unbleached	2.40	@	2.50
No. 1 Kraft	2.40	@	2.75
No. 2 Kraft	2.35	@	2.50
Sulphate—			
Bleached	3.60	@	3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—			
Bleached	3.40	@	4.75
Easy Bleaching Sulphite	2.65	@	3.00
News Sulphite	2.50	@	2.70
Mitscherlich	3.00	@	3.25
Kraft (Domestic)	2.50	@	3.30
Soda Bleached	3.10	@	3.25
Sulphate Screenings—			
Coarse	.75	@	.95
Refined	1.65	@	1.85

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—			
New White, No. 1	11.00	@	11.50
New White, No. 2	8.00	@	8.50
Silesias No. 1	7.50	@	8.00
New Unbleached	11.00	@	11.50
New Blue Prints	5.25	@	5.50
New Soft Blacks	5.25	@	5.75
Blue Overall	7.50	@	8.00
Washables	4.75	@	5.25
Fancy	5.75	@	6.25
Mixed Khaki Cuttings	4.75	@	5.25
Pink Corset Cuttings	8.00	@	8.50
O. D. Khaki Cuttings	5.15	@	5.75
Men's Corduroy	3.75	@	4.25
New Mixed Blacks	3.50	@	3.75

Old Rags

White, No. 1—			
Repacked	5.50	@	6.00
Miscellaneous	4.50	@	5.00
White, No. 2—			
Repacked	3.00	@	3.50
Miscellaneous	2.50	@	2.75
St. Soiled, White	2.00	@	2.15
Thirds and Blues—			
Repacked	2.25	@	2.50
Miscellaneous	1.75	@	2.00
Black Stockings	3.25	@	3.75
Roofing Rags—			
Cloth Strippings	1.70	@	1.80
No. 1	1.70	@	1.80
No. 2	1.55	@	1.65
No. 3	1.30	@	1.40
No. 4	1.25	@	1.35
No. 5A	.90	@	1.05

Foreign Rags

New Rags

New Dark Cuttings	2.50	@	3.00
New Mixed Cuttings	2.75	@	3.25
New Light Silesias	7.00	@	7.50
Light Flannelettes	7.50	@	8.00
Unbleached Cuttings	10.00	@	11.00
New White Cuttings	10.50	@	11.50
New Light Oxfords	7.00	@	7.50
New Light Prints	5.50	@	6.50

Old Rags

No. 1 White Linens	7.50	@	8.25
No. 2 White Linens	5.75	@	6.75
No. 3 White Linens	4.75	@	5.25
No. 4 White Linens	3.00	@	3.50
No. 1 White Cotton	5.50	@	6.30
No. 2 White Cotton	4.50	@	5.50
No. 3 White Cotton	3.00	@	4.00
No. 4 White Cotton	1.90	@	2.15
Extra Light Prints	2.75	@	3.25
Ord. Light Prints	2.25	@	2.50
Med. Light Prints	2.00	@	2.10
Dutch Blue Cottons	2.25	@	2.40
French Blue Linens	2.75	@	2.85
German Blue Linens	2.35	@	2.55
German Blue Cottons	2.15	@	2.25
Checks and Blues	1.85	@	2.00
Lindsay Garments	1.85	@	1.95
Dark Cottons	1.60	@	1.65
Old Shopperies	1.55	@	1.60
New Shopperies	1.50	@	1.60
French Blues	2.10	@	2.25

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—			
Foreign	1.60	@	1.70
Domestic	1.70	@	1.75
Wool Tares, light	1.60	@	1.65
Wool Tares, Heavy	1.60	@	1.70
Bright Bagging	1.60	@	1.70
Small Mixed Rope	1.25	@	1.40
Manila Rope—			
Foreign	4.60	@	4.85
Domestic	5.00	@	5.25
New Burlap Cut	2.75	@	3.00
Hessian Jute Threads—			
Foreign	3.50	@	4.00
Domestic	3.25	@	3.50

Old Waste Papers

(F. o. b. New York)

Shavings—			
Hard, white, No. 1	3.25	@	3.50
Hard, white, No. 2	2.40	@	2.55
Soft, White, No. 1	2.50	@	2.60
White envelope cuttings	3.00	@	3.50
Flat Stock—			
Stitchless	1.60	@	1.70
Overissue Mag.	1.50	@	1.60
Solid Flat Book	1.40	@	1.50
Crumpled No. 1	1.00	@	1.10
Solid Book Ledger	2.00	@	2.10
Ledger Stock	1.40	@	1.50
New B. B. Chips	.65	@	.75
Manilas—			
New Env. Cut	2.40	@	2.60
New Cuttings	1.50	@	1.75
Extra No. 1 old	1.25	@	1.35
Print	.75	@	.80
Container	.57½	@	.60
Bogus Wrapper	.75	@	.85
Old Kraft Machine Compressed bales	1.90	@	2.00
News—			
No. 1 White News	1.65	@	1.75
Strictly Overissue	75	@	.80
Strictly Folded	.57½	@	.62½
No. 1 Mixed Paper	.42½	@	.47½
Common Paper	.30	@	.35

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Kalamazoo Tank & Silo Co.
Kalamazoo Michigan

Twines
(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unfinished India—			
Basis	.13	@	.14
Paper Makers Twine			
Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Amer. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.30	@	.53¼
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¼	@	.07¼
No. 2 S.&S.C. Book	.05¼	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¼	@	.05¼
No. 1 Fibre	.04¼	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¼	@	.06½
Southern Kraft	4.25	@	4.50
No. 2 Kraft	.04	@	.04¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¼
White Tissue—			
20x30 Sheet	.07¼	@	.07½
(Delivered Central Territory)			
News, per ton—			
Rolls, contract	62.00	@	—
Sheets	67.00	@	—
Boards, per ton—			
Plain Chip	37.50	@	42.50
Solid News	47.50	@	—
Solid News	40.00	@	45.00
Manila Lined Chip	50.00	@	55.00
Container Lined—			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.20	@	2.25
White Env. Cuttings	2.40	@	2.50
No. 1 Soft Shavings	2.00	@	2.10
No. 1 Mixed	.90	@	1.00
No. 2 Mixed	.70	@	.75
Ledger & Writings	1.25	@	1.35
Solid Books	1.25	@	1.30
Blanks	1.40	@	1.50
Krafts	1.60	@	1.75
New Kraft Cuts	2.15	@	2.25
Manila Envelope Cuttings	1.65	@	1.75
Ex. No. 1 Manila	1.30	@	1.45
Print Manila	.75	@	.80
Folded News (overissue)	.80	@	.85
Old Newspapers—			
No. 1	.65	@	.70
No. 2	.60	@	.65
Mixed Papers—			
No. 1	.60	@	.65
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.06	@	.40
Ledgers	.09	@	.40
Writings—			
Superfine	.12½	@	.18
Extra fine	.18	@	.22
Fine	.17	@	.26
Fine, No. 2	.15	@	.25
Fine, No. 3	.10	@	.20
Book, M. F.	.05½	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.09½	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.08	@	.09
Manila Sul., No. 1	.04	@	.05½
Manila No. 2	.03	@	.04
No. 2 Kraft	.06	@	.06½
No. 1 Kraft	.06½	@	.07
Common Bogus	.03½	@	.04
(Delivered Philadelphia)			
News Print Rolls	62.00	@	—
Straw Board	52.50	@	75.00
News Board	35.00	@	40.00
Chip Board	32.00	@	40.00
Wood Pulp Board	85.00	@	95.00
Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	68.00	@	70.00
Tarred Felts—			
Regular	55.50	@	57.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07	@	.09
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Blue Overall	.07½	@	.08
Cottons—According to grades—			
Washable, No. 2	.03	@	—
New Blue	.03	@	.03½
Fancy	.05½	@	.06
New Black Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04½

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.20	@	3.25
No. 2 Hard White	2.75	@	3.00
No. 1 Soft White	2.80	@	2.90
No. 2 Soft White	1.80	@	1.90
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.85	@	1.90
Writing Paper	1.60	@	1.65
No. 1 Books, heavy	1.40	@	1.50
No. 2 Books, light	1.05	@	1.15
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	.95	@	1.00
Container Manila	.85	@	.90
Old Kraft	2.25	@	2.50
Common paper	.50	@	.55
No. 1 Mixed Paper	.60	@	.65
Straw Board, Chip	.60	@	.65
Binders Board, Chip	.60	@	.65
Overissue News	.80	@	.85
Old Newspaper	.50	@	.55

Domestic Rags (Old)

White, No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
White, No. 2	2.00	@	2.25
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.65	@	1.75
Repacked	.02½	@	.02¾
No. 2	1.30	@	1.35
No. 3 (Roofing)	1.15	@	1.25
No. 4	1.00	@	1.15
No. 5A	.75	@	.85
B	.65	@	.75
C	.65	@	.75

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05¼	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¼	@	.06½
Manila, Sul. No. 2	.03¼	@	.04½
No. 1 Kraft	.06¼	@	.06½
No. 2 Kraft	.04½	@	.05½
Common Bogus	.02	@	.02¾
Delivered New England points			
News Print Rolls	61.50	@	—
Straw Boards, rolls .009			52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	37.50	@	40.00
Chip Board	35.00	@	37.50
Single Manila Lined Chip	47.50	@	50.00
Single White, Patent Coated Newsboard			
Bender	65.00	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.40	@	2.50
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.35	@	2.45
No. 1 Books, Heavy	1.50	@	1.55
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	.90	@	1.00
White Blank News	1.50	@	1.60
Old Kraft	1.75	@	1.80
Print Manila	.80	@	.90
No. 1 Mixed Paper	.40	@	.45
Overissue News	.65	@	.70
Old Newspapers	.50	@	.52½
Box Board, Chip	.55	@	.60

Bagging
(F. o. b. Boston)

Gunny No. 1—			
Foreign	1.50	@	1.75
Manila Rope—			
Foreign	4.75	@	5.00
Domestic	5.00	@	5.25
Transmission Rope	2.00	@	2.25
Mixed Strings	.90	@	1.00
Jute Wool Strings	1.00	@	1.05
Jute Carpet Threads	1.00	@	1.10
Scrap Burlaps	1.37½	@	1.50
Scrap Sisal	1.87½	@	2.00
Scrap Sisal for shredding	1.85	@	2.00
Wool Tares, heavy	1.60	@	—
New Burlap Cutting	1.90	@	2.00
Australian Wool Pouches	3.00	@	3.12½

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.09½	@	.10
Silesias, No. 1	.06	@	.06¼
New Unbleached	.10	@	.10½
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06¼	@	.06¾
New Black, soft	.04	@	.04¼
Khaki Cuttings	.04	@	.04¾
O. D. Khaki	.05	@	—
Corduroy	.03	@	.03½
New Canvas	.08	@	.08½

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	2.75	@	3.00
Thirds and Blues—			
Repacked	2.50	@	—
Miscellaneous	1.75	@	1.90
Black Stockings	—	@	4.00
Roofing Stock—			
No. 1	1.65	@	1.75
No. 2	1.45	@	1.55
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags
(F. o. b. Boston)

Dark Cottons	1.55	@	1.60
New No. 1 Shirt Cuttings	9.00	@	10.00
Dutch Blues	2.00	@	2.12½
Lace Curtains	5.00	@	5.12½
New Checks & Blues	4.25	@	4.60
Old Fustians	1.90	@	—
Old Linsey Garments	1.85	@	1.90

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	11.50	@	—
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.80	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.00	@	—

(Delivered Toronto)

News, per ton—			
Rolls (contract)	61.50	@	62.00
Sheets	67.00	@	—

Pulp
(F. o. b. Mill)

Ground Wood	30.00	@	31.00
Sulphite easy bleaching	60.00	@	—
Sulphite news grade	60.00	@	—
Sulphite, bleached	77.00	@	—
Sulphate	60.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.85	@	—
Strictly Folded	.85	@	—
No. 1 Mixed Paper	.65	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.10	@	.10½
Fancy Shirt Cuttings	.05¼	@	—

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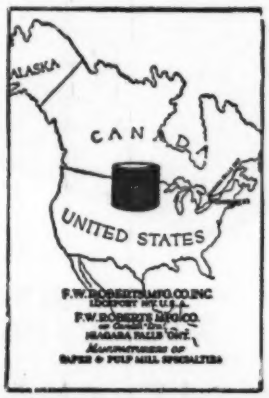

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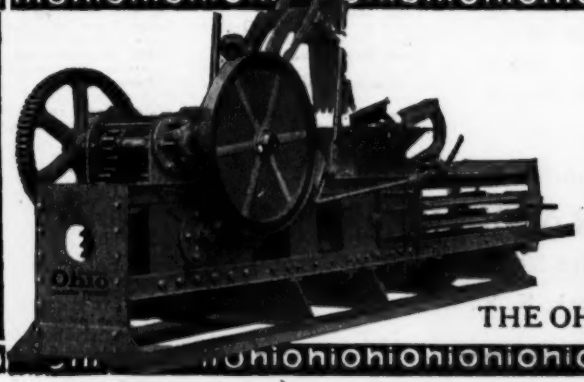

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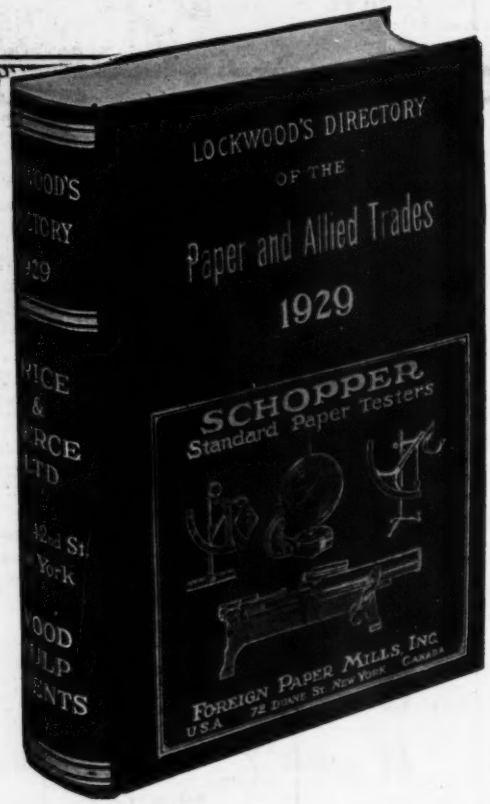

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FIFTY-EIGHTH YEAR

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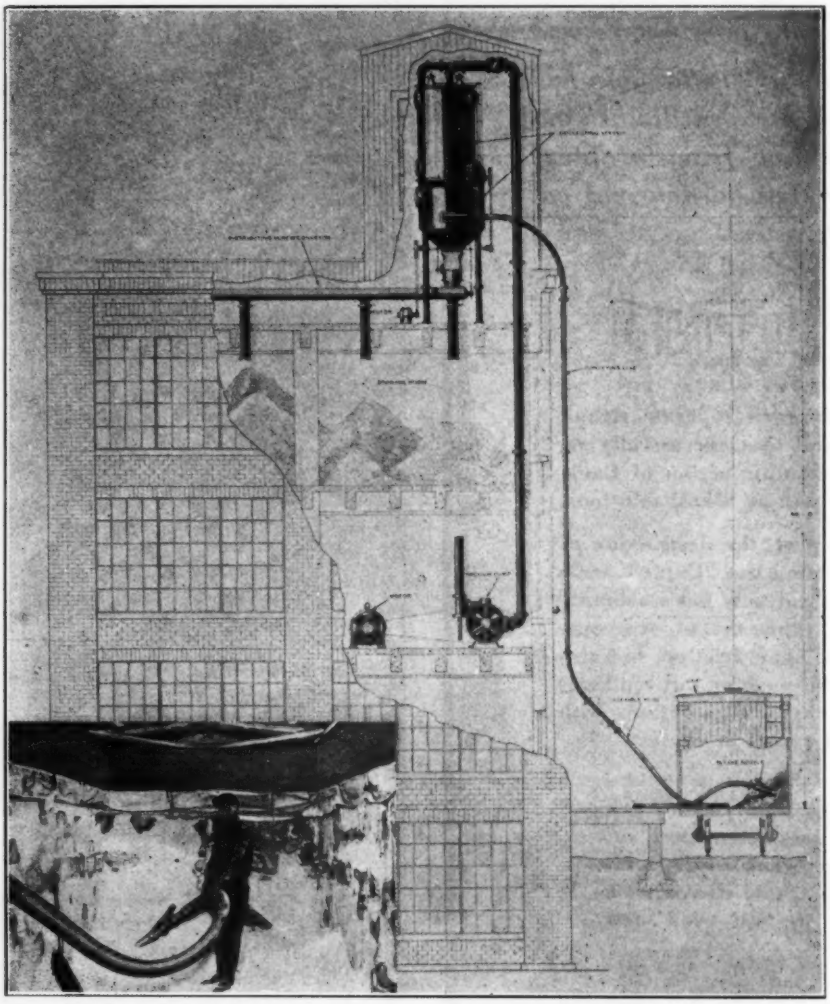

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